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Survival Competition in IoT OS  
Platform Market Begins

**SPECIAL REPORT**

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Court Rules in Favor of Hyundai  
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# BUSINESSKOREA

FEBRUARY 2015 / VOL. 32 NO. 358

[www.businesskorea.co.kr](http://www.businesskorea.co.kr)

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Special Attention Needed for Steel, Oil Refining, and Chemical Sectors

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**PUBLISHED BY :** BusinessKorea Co., Ltd. : 301 Samdo Building,  
12-1 Yeoido-dong, Yeongdeungpo-gu, Seoul, Korea 150-010  
**Mailing Add.:** 301 Samdo Building,  
12-1 Yeoido-dong, Yeongdeungpo-gu, Seoul, Korea 150-010  
**Tel:** (02)578-3220 **Fax:** (02)578-3224  
Government Registration Number: RA-2743 Dated March 18, 1983.  
Printed by Hwashin Printing Tel: (02)2277-0624

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## Denuclearization of North Korea and Improvement in Inter-Korean Relations

In commemoration of the 70th anniversary of national liberation, both South and North Korean leaders gave New Year's addresses signaling better inter-Korean relations. However, they are not taking any specific actions for fence mending, while mentioning the necessity of bilateral talks. Under the circumstances, Washington is poised to strengthen its pressure on the North for human rights issues and the recent hacking of Sony Pictures. In response, Pyongyang is blaming the U.S. for hindering the improvement of inter-Korean relations.

The U.S. State Department recently repeated its position in support of such talks, adding that the dialogue will be an opportunity for returning the North to truthful and reliable negotiations about the denuclearization of the Korean Peninsula. The remarks imply that the U.S. supports better North-South relations only on the condition that denuclearization is given the top priority during the talks. President Park Geun-hye's mentioning of the issue at the head of her New Year's speech has to do with Washington's stance.

Although both Seoul and Washington agree upon the basic principle of a virtuous cycle between improved relations and denuclearization, they are likely to balk at an approach that focuses more on the improvement of relations than on denuclearization. In contrast, North Korea is unlikely to accept an approach giving priority to denuclearization. In any case, the pace of the improvement cannot but be limited.

In his New Year's address, North Korean leader Kim Jong-un called for the joint military exercise between South Korea and the U.S. to be stopped, without mentioning the denuclearization issue at all. In addition, North Korea's representatives to the United Nations recently suggested a temporary and simultaneous stop of the military exercise and its nuclear experiments, while calling for direct talks with the U.S. However, the U.S. responded negatively to the request. According to Washington, the North is just trying to avoid the denuclearization issue and international sanctions with such gestures. In short, what matters is the sincerity of North Korea in trying to mend bilateral relations.

Therefore, the progress of the relations cannot but depend on the will of the Park Geun-hye administration, its capabilities of policy coordination with the U.S. based on their key mutual interests, and North Korea's attitude change concerning the nuclear issue. This poses a strategic flexibility challenge to the South Korean government.

Park Jung-hwan,  
Publisher & Editor-in-Chief



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Global ICT manufacturers and service providers are expected to start fierce competition for dominance in the Internet of Things (IoT) operating system (OS) market, which has been in the limelight since 2014. ICT giants, Microsoft, Qualcomm, Intel, Cisco, and the three smartphone rivals of Samsung, Google, and Apple, have all joined the competition with their own strategies and products.

Microsoft showed off the features of Windows 10, the new OS for IoT, at CES 2015 in Las Vegas from Jan. 6 to 9. Windows 10 has reportedly expanded and improved its IoT features, and clearly shows its future plans to compete in the IoT OS market.

Qualcomm and Intel, the world leader in mobile application processors (APs) and semiconductors, respectively, have also set their sights on an IoT OS, and introduced their new IoT OS early this year to take the crown from smartphone giants.

The competition among smartphone giants will get stiffer. Google is working to build an Android ecosystem in the smart home IoT market, and will introduce its Android TV with SONY, Sharp, and Philips at CES 2015. Samsung is also switching applications and features of its own OS Tizen from smartphones to IoT.

In the meantime, Apple is setting its own strategy to tackle the market. The company will introduce a variety of convergence platforms such as the connected-car platform CarPlay and the near field communications-based information sharing platform iBeacon along with iWatch.

## **Samsung, LG Showcase Their IoT Initiatives at CES 2015**

Under the circumstances, Samsung and LG Electronics introduced the limitless possibilities of the Internet of Things (IoT), showing their specialized technology and vision prior to CES 2015.

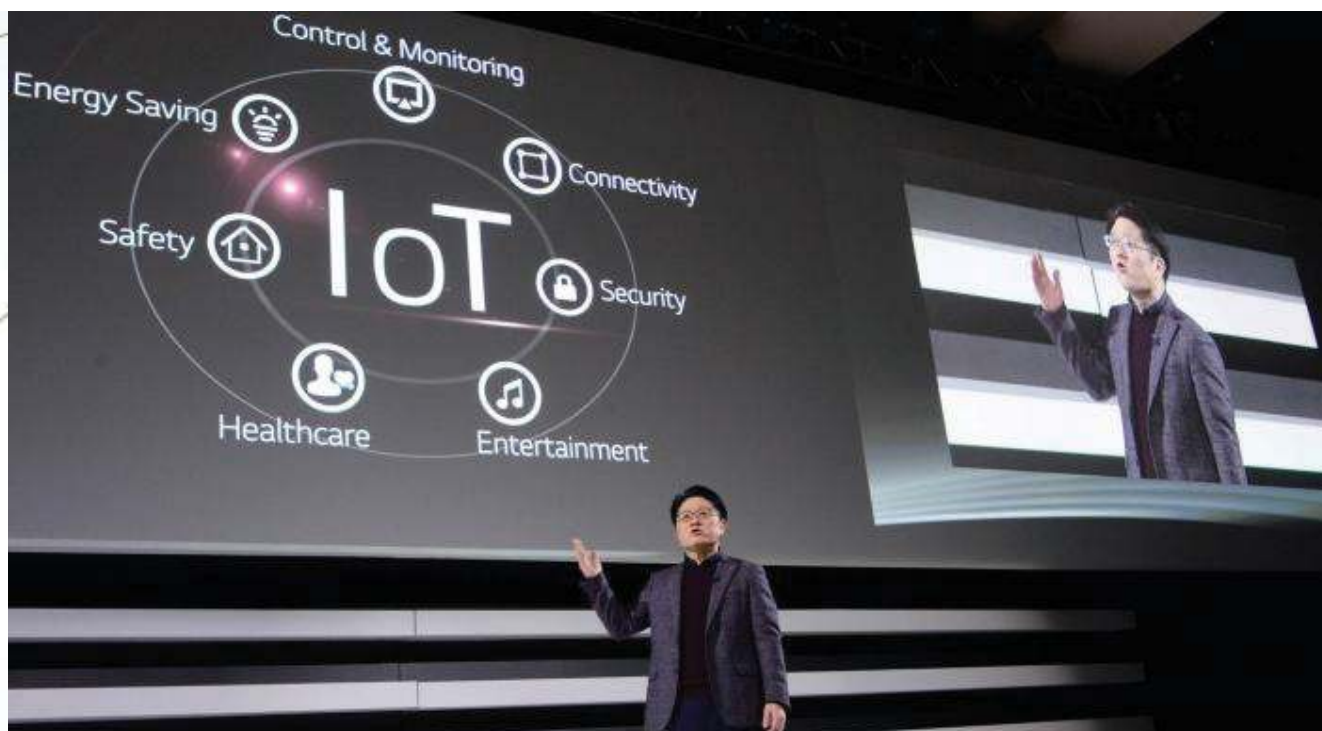
Samsung is planning to make a US\$100 million investment in supporting IoT developers this year, and to build the foundation of services that connect its TVs and all kinds of its products to IoT platforms by 2017 and 2020, respectively.

"The IoT can protect people according to their needs and conditions, and enrich their lives. Furthermore, it is the source of boundless possibilities that can change the society and economy of countries," said Yoon Boo-keun, head of the consumer electronics (CE) division at Samsung, at a press conference in Las Vegas on Jan. 5 (local time).

Yoon introduced gesture recognition sensors, micro olfactory sensors that can detect 20 types of smell, and embedded Package On Package that integrates mobile application processors, DRAM, and NAND flash.

"The IoT has unbounded possibilities, but it is not compatible with all kinds of platforms. Moreover, it cannot help indus-





Ahn Seung-kwon, chief technology officer for LG Electronics, speaks about LG's Internet of Things initiatives at CES 2015.

tries cooperate with each other, either. These are big barriers to the arrival of the IoT era,” stressed Jeremy Rifkin at the event.

Related to this issue, Yoon remarked, “To realize the true value of the IoT, there should be no barriers between different devices and platforms.” He added, “Samsung's IoT technology and products are based on openness, and our acquisition of open-source platform provider SmartThings last year is part of this strategy.”

SmartThings CEO Alex Hawkinson said, “After we started to cooperate with Samsung Electronics in August of last year, the number of developers in collaboration with SmartThings has doubled just in four months.” He added, “We are actively seeking open business partnerships, as shown by our efforts to develop new IoT services through our partnership with Philips and Netgear.”

Yoon Boo-keun, CEO of the Consumer Electronics division of Samsung,

speaks about the Internet of Things at his keynote speech at CES 2015.

LG, on the other hand, showcased the WebOS 2.0 platform and Wellness platform at the same day.

“LG will lead the IoT market through open strategies, including our efforts to differentiate IoT platforms, strengthen connectivity between devices, and expand the IoT ecosystem,” said Ahn Seung-kwon, chief technology officer at LG.

The WebOS 2.0 platform, an upgraded version of WebOS, is designed for smart TVs. In consideration of consumers' use patterns, the new platform provides more intuitive and convenient user experiences. In addition, half as much time is needed than existing ones to load the home screen and change into the app screen.

The Korean tech giant is planning to use the WebOS 2.0 platform for B2B products like TVs for hotels and digital signage, and expand to IoT platforms in the future.

The Wellness platform can manage people's health and living environments by syncing with smartphones, wearable devices, and household appliances equipped with LG's bio-signal analysis technologies. It can control surrounding devices such as air purifiers and air conditioners by analyzing various types of information on about a user's body, including their sleep habits and the number of their heartbeats.

LG also unveiled automotive infotainment systems and solutions that connect smartphones or wearable devices in real time.

On top of that, the company is going to strengthen its cooperation with oneM2M, a consultative body for IoT standards, and AllSeen Alliance's IoT platform AllJoyn to make its products more compatible with devices produced by other companies.

Ahn also revealed the company's plan to expand the IoT ecosystem. He said,



Yoon Boo-keun, CEO of the Consumer Electronics division of Samsung, speaks about the Internet of Things at his keynote speech at CES 2015.

“LG will cooperate with major smart home service providers and Icontrol Networks, which specializes in certifying remote control technologies. And we will continue to expand services that connect HomeChat.”

### Independence from Google's Android OS

As Samsung and LG Electronics are strengthening strategies for the Internet of Things (IoT), they are actively seeking to reduce their reliance on Google's Android Wear, a wearable version of Google's Android operating system (OS).

According to industry sources on Jan. 11, Samsung Electronics is going to unveil its new Tizen OS-powered smart watches at MWC 2015 to be held in Barcelona, Spain in March. After releasing its first Android Wear-enabled smart watches called the Galaxy Gear and Gear Live, it used Tizen OS in the following models

such as the Gear 2 and Gear S.


LG, which received a lot of attention in the wearable device industry as a leader of Google's Android OS, showcased its own webOS-based smart watches at CES 2015. The new model has the same design as the Android Wear-powered smart watch named the G Watch R. The Korean tech company explained that it was made to demonstrate that it can sync with Audi cars. Thus, the release date for the model is uncertain. However, some overseas media outlets reported that LG is expected to launch the webOS-based smart watch next year.

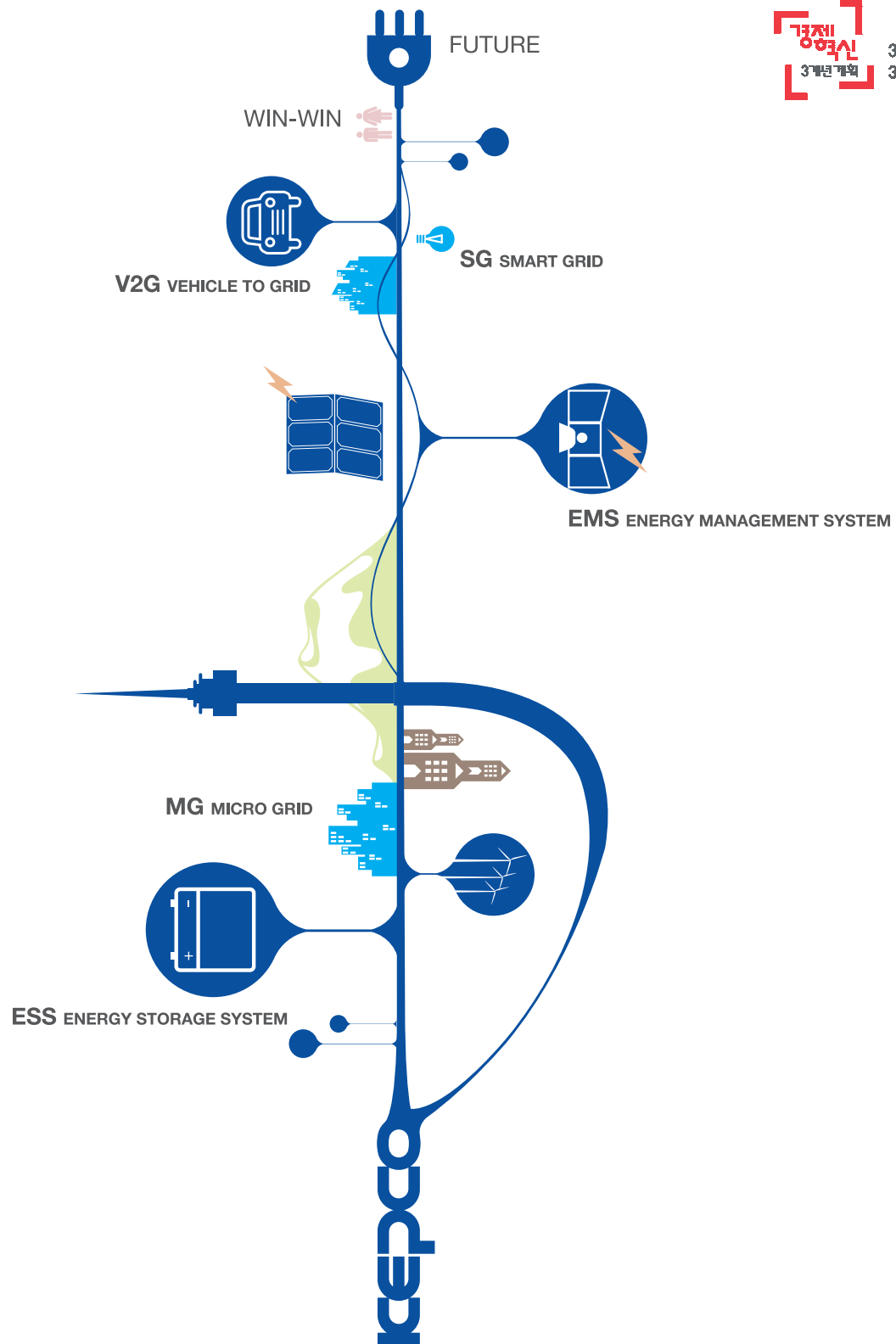
Google is aggressively seeking to expand the ecosystem for its wearable software with the introduction of the Android Wear last year, while mobile device manufacturers appear to focus on the development of their own OS for wearable devices.

In the past, their efforts to develop their own OS were aimed at lessening

their serious dependence on Google's Android OS and securing their competitiveness in mobile platforms. Currently, their endeavor can be interpreted as their intention to speed up the expansion of their own OS so that they can dominate the IoT market.

In fact, Samsung and LG debuted their Tizen and webOS-based IoT technologies at CES 2015. Both of them revealed TVs equipped with their own OS, and showed IoT visions through technologies for cars, consumer electronics, and healthcare, which can be controlled by mobile devices fitted with their own OS.

Industry analysts are saying that as the two tech giants are cited as two pillars of the home appliance industry, their recent move can be interpreted as their desperation to survive by escaping from their dependence on mobile OS and reclaiming market dominance of software platforms in the IoT era. 



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## North Gyeongsang Province

# Preparing for Upcoming East Sea Era as Starting Point of Eurasian Initiative

North Gyeongsang Province Governor Kim Gwan-yong, elected for the third time in the June 4 local election last year, said that he would focus on job creation and investment attraction throughout this year.

"In the province, a total of 6.3243 trillion won (US\$5.7401 billion) will be invested in social overhead capital this year, and 27 projects are scheduled to be completed or started to this end, while the 1+1 Creative Economy Innovation Center will be put into operation for the development of future growth drivers," he said, adding, "Gumi will concentrate on manufacturing, and Pohang will be the local hub of the energy industry, with the other regions in the province focusing on carbon fiber, 3D printing, information and communications technology, robotics, biotech, and water resources."

At the same time, the province is planning to enhance the competitiveness of the agricultural sector to provide against FTAs with the U.S., E.U., and so on. In this context, it is going to strive to expand exports and enhance quality, while working on better distribution systems in step with the central government's trade profit sharing scheme and country of origin system.

## Provincial Government Relocation and New Development Strategies

"This year, the relocation of the provincial government building is completed, and I hope this will accelerate the development of the northern part of North Gyeongsang Province, which has been less developed than Daegu, Gumi, or Pohang," he mentioned, continuing, "The relocation will form a creative economic zone with nearby Sejong City with more inter-regional traffic networks established this year." The new provincial government building has adopted a classical architectural style, and 700 tile-roofed houses



were built around the building to add to the traditional beauty.

The provincial government has changed its regional development policy in view of the relocation. It has divided the province into the northern, East Sea, western, and southern parts, and prepared development strategies allowing for their regional characteristics.

The northern part, home to the new provincial government, is slated to function as the linchpin of biotechnology and culture. The Vaccine Cluster and the Bio Green Valley are set up, and the cultural tourism industry is promoted by projects like the Silgyeong Musical, traditional houses, and Baekdudaegan Train.

An ocean industry zone is being built in the East Sea region with the Nuclear, Accelerator, and National Resources Development Clusters linked to each other for the development of high technology and energy technology. The Yeongilman



Port is scheduled to be developed as the hub of marine transportation and logistics business to prepare for the development of the North Pole Route and the Eurasia Era.

The Smart Convergence Belt is housed in the western region so that the existing industries can be combined with information and communications technology in the Convergence Carbon Fiber Molding Cluster, Water Industry Valley, and 3D Convergence Industry Valley. The North Provincial Creative Economy Innovation Center is planned to be located in Gumi City for manufacturing innovation and closer collaboration with the Samsung Group.

The southern part is concentrating on creative knowledge and services. For example, Gyeongsan is to be developed as a knowledge industry valley of construction machinery and auto parts manufacturers, while Yeongcheon focuses on the aviation industry with Boeing's MRO facility

located in the city.

### East Sea, Starting Point of Eurasia Initiative

The development of the East Sea region is part of the Park Geun-hye

tute, and many more so that the province can be the center of Korea's leading role in Eurasia.

In this context, the province is going to turn the central and southern sections of the railway in the region into the starting point of the Silk Road Express (SRX). It

World Classical Scholar Culture Park. The cultural heritage of Gaya is to be restored in Goryeong and Seongju, and the Great Gaya Ancient Tomb Site is expected to become a UNESCO World Heritage site.

Cultural infrastructure is going to be expanded, with the focus shifting from hardware to software. The infrastructure will be combined with the tourism and digital content industries so that tourism in the province can be further developed from simpler sightseeing to hands-on and leisure-centered tourism utilizing cultural and historical resources.

The province is hosting the Silk Road Grand Cultural Festival, too. Last year, 30 countries were invited for the 59-day program that continued from Aug. 21 to Oct. 18. Also, the Istanbul-Gyeongju Culture Expo and the Istanbul in Gyeongju event were held with great success to shed new light on the history and culture of Shilla.

The province governor has consistently put an emphasis on the soul and spirit of North Gyeongsang Province. "The province has been the source of the Hwarangdo, Seonbi culture, patriotism, and the Saemaewul Movement, and cherished the national spirit of all of Korea through history," he remarked, adding, "The proud legacy will be valuable social assets and the identity of the region."

He has striven to tackle the regional conflict between Gyeongsang and Jeolla Provinces as well. He and many others have urged politicians to eradicate the problem because it is them that caused the problem at first. Their call has been answered by the 26 lawmakers in the provinces who launched the East-West Forum in Dec. 2013 and visited the birthplaces of former Presidents Kim Dae-jung and Park Jung-hee. Also, the heads of the four local governments discussed the issue in earnest at the Grand Discussion for Yeongnam and Honam on Nov. 5 last year. "I am sure that cooperation and mutual prosperity will be further boosted with time," he mentioned, continuing, "I hope the regions will work more closely together to counterbalance the expansion of the metropolitan area and provide against the reunification of both Koreas."

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administration's Eurasia Initiative policy for more active trade in the Eurasian continent and growth of the region in preparation for inter-Korean reunification.

North Gyeongsang Province and the East Sea can be compared to the geopolitical pivot of the government's northward policy. On Nov. 29 last year, approximately 40,000 tons of bituminous coal arrived at the Yeongilman Port from Russia via the Rajin Port in North Korea as a part of the Rajin-Khasan Project. The northeastern region of Russia is rich with energy and mineral resources, and more than 600 million tons of clathrate hydrate is estimated to be buried there, which is equivalent to the amount Korea can use for 30 years. The central and provincial governments are planning to put more of it to commercial use while establishing an R&D zone of an Accelerator Cluster, Science Belt, National Resources Development Cluster, Marine Bio Research Insti-

will form a foothold for the continent in and around the Yeongilman Bay in connection with the expressways between Ulsan and Pohang and between Pohang and Yeongdeok, which are scheduled to be completed and break ground this year, respectively.

### Convergence of Confucianism and Heritage of Shilla and Gaya Kingdoms

Regarding the cultural policy of the central government, North Gyeongsang Province combines the legacy of the Shilla Kingdom, Confucianism, and the culture of Gaya with each other. To this end, royal palaces of the Shilla Kingdom are to be restored in and around Gyeongju, while the history of the kingdom is to be compiled. In Andong and Yeongju, the 21st Century Humanistic Value Forum is planned to take place along with the



## Reconciling Mood

## Seoul, Pyongyang Agreeing to Mend Fences?

As North Korea is showing hope for the reconciliation of inter-Korean relations, it is becoming noticeable whether the infarction between North and South Korea might ease this year, which marks the 70th anniversary of national liberation and the 70th year of the division of the Korean peninsula. Close attention is being paid to what effect the historical significance will have on the possibility of inter-Korean dialogue.

North Korean expectations have been revealed through remarks made by Kim Yang-Gon, North Korean Secretary of United Front Department and Secretary in Charge of South Korean Affairs, who is empowered with general direction over South Korean policies of North Korea.

Former South Korean culture minister Kim Sung-Jae told that secretary Kim showed the response that they “understand” the “sincerity” expressed by the Park Geun-Hye administration in regards to remediating the inter Korean relations, during their meeting held in Kaesong on Dec. 24.

The posture is quite different from the reprimanding attitudes maintained by North Korea so far against South Korean government’s northern policies, such as the idea of “unification as a Jackpot,” the Dresden initiative and the trust-building process on Korean peninsula, which were regarded by North Korea to be schemes of regime confrontation aimed towards absorbing unification.

Remarkable is that secretary Kim did not directly mention on discontinuing scattering leaflets into North Korea, the issue which North Korea claimed as

a prerequisite to begin conversation. North Korea refused to participate in the second North-South executive contact with pretexts regarding leaflet scattering into their territories.

It is also worth noticing that secretary Kim said, “We would like to seek opportunities from issues such as Kumsangsan tour, the 5-24 sanctions and reunion of the separated families, which could turn a small alley into a broad pathway of understanding.”

Under the circumstances, the South Korean government sent a telephone message on Dec. 29 to secretary Kim and made an offer to North Korea for bilateral talks in January 2015.

The timing of the offer is somewhat unusual. The New Year was coming to an end and the New Year’s address of the North, which shows its stance toward the South, was scheduled to be issued on Jan. 1. Experts consider the unusual offer as Seoul’s desire to be more active in inter-Korean relations in the upcoming year, when the Park Geun-hye administration passes the halfway point.

On Jan. 1, North Korean leader Kim Jong-un responded that there is no reason Pyongyang and Seoul cannot have high-level talks if the situation permits. “The bilateral relations should have a new his-

tory based on a major shift,” he added.

President Park Geun-hye likewise said late last year that she would put more effort toward peaceful reunification of the Korean Peninsula with the possibility of a summit meeting not ruled out. “I am ready to meet with Mr. Kim Jong-un, and Seoul is willing to help Pyongyang,” she mentioned at her interview with the Le Figaro on Nov. 2, adding, “However, we do not welcome a one-off event, because what matters is sincerity.”

Therefore, the government may make a significant concession to Pyongyang on the condition that the issue is properly addressed. The concession he mentioned is considered to include lifting of the May 24 sanctions and resumption of the Mt. Kumsang tourism project.

Some experts even predict that the talks will lead to a summit meeting between the two Korea. Both President Park Geun-hye and North Korea leader Kim Jong-un have been invited to the ceremony in Russia for the 70th anniversary of the end of WWII scheduled for May. Alternatively, the two leaders may meet with each other during the National Liberation Day celebrations on Aug. 15.

Expert consensus is that the North is likely to respond positively to the offer itself, because it has pursued better relations with the South throughout this year, despite some provocations. The isolation of the North as of late, which is accelerated due to the human rights issue and recent hacking of Sony Pictures, could act positively on the situation, too. ■







US-North Korea Cyber War

# US President Imposes Sanctions on North Korea in Retaliation for Sony Hack

The death scene of Kim Jong-un in the movie *The Interview*. Kim Jong-un, depicted here, screams as a shell hits his helicopter, incinerating him in slow motion to the tune of Katy Perry's song *Firework*.

With the pledge of proportionate response by the United States regarding the recent hacking attack on Sony Pictures Entertainment coming out after pointing out North Korea as the culprit acting behind the attack, the North Korean connection to the Internet stopped functioning as of December 21, suggesting the possibility of “cyber warfare” between the two nations.

According to news reported by major American media including the New York Times (NYT) on Dec. 22, the North Korean connection to the Internet became unstable on the 19th, followed by the complete loss of connection on the 22nd.

The outbreak occurred right after United States President Barack Obama publicly pledged a “proportional response” to North Korea's attack, following an official announcement by the United States Federal Bureau of Investigation (FBI), which stated that the cyber attack on Sony Pictures was launched by North Korea.

A day before the shutdown, North Korea spoke out through their announcement, “The U.S. claims that North Korea is behind the hacking of Sony Pictures are without any reason at all,” threatening, “We will launch retaliation with extreme prejudice on the entire continent of the United States, the very stronghold of terrorism.”

Evidence about the hacking of Sony Pictures Entertainment, however, was recently released by James Comey, director of the FBI. He said on Jan. 7 (local time), “In nearly every case, used proxy servers to disguise where they were coming from in sending these emails and posting these statements. But several times they got sloppy.” Sony Pictures was recently hacked and the hackers attempted to prevent the release of the film about the assassination of Kim Jong-un titled “The Interview.”

Speaking at the international conference on Cyber Security at Fordham University in New York City, Comey said, “Several times, either because they forgot or because of a technical problem, they connected directly and we could see that the IPs they were using ... were exclusively used by the North Koreans.” He


continued by saying, “They shut it off very quickly once they saw the mistake, but not before we saw where it was coming from.”

Earlier, President Barack Obama concluded that the North Korean regime is directly involved in the cyber-attack, and issued an administrative order for sanctions on North Korea on Jan. 2 (local time). Experts point out that the order has political and diplomatic significance beyond simple sanctions, in that the president signed it in a hurry before returning from his vacation in Hawaii.

According to the administrative order, the North Korean Reconnaissance General Bureau, Mining Development Trading Corporation, and Tangun Trading Corporation are subject to the sanctions along with 10 individuals. The president declared that he would get even with the North on Dec. 19 last year. He said that the hacking had significantly affected his country and that he would respond proportionally to the attack. His hard-line stance implies that Washington is considering the cyber attack seriously and as a direct provocation against itself.

In the meantime, North Korea has denied the accusation while pegging the U.S. as the culprit of the recent Internet disconnection in the North. “President Obama and his aides committed a crime by screening the movie on Christmas day,” a statement from North Korea said. It also compared Obama to a monkey.

President Obama is expected to keep stepping up pressure on the North. “The administrative order is the U.S. government's first action against North Korea,” said White House spokesperson Josh Earnest, implying that there will be follow-ups. Possible examples of the measures to come include the re-designation of North Korea as a state sponsor of terrorism for the first time since November 2008.

“The United States recently declared the normalization of diplomatic relations with Cuba in 53 years and is seeking to mend fences with Iran,” said a political expert, adding, “Its tough stance seems to have to do with taming the last remaining hostile country rather than simply retaliating against the North for the Sony Pictures hack.” 

## Mounting Hacking Threat

# Government Strengthens Security Systems of National Infrastructure

A hacker that disclosed confidential documents two times early in December last year relating to atomic power stations in Korea threatened that 100,000 or so more documents more documents would be handed over to other countries and that secondary destruction would follow unless the power plants are shut down by Dec. 25. The threat, however, ended in just a disturbance.

In relation with the threat, an anonymous expert commented, "It seems that the North is behind the curtain because the group, disguised as an environmental organization, has used North Korea-style words and tones, and is similar to the hacker group engaged in the June 25 cyber terror, in that it is trying to cause a social chaos by using the media." "The incident at this time is likely to be closely associated with the cyber terrorist attack against Cheongwadae, the residence of the president of Korea, on June 25, 2013, and the recent hacking of Sony Pictures. The similarities include that the hacker publicized his or her hacks via SNS, leaked hacked data using the Pastebin website, and falsified the hacked website.

It has been found in a recent investigation that the malicious file sample detected in Sony Pictures carried Korean-language content, and that the malicious file was of the same type as that used in the June 25 attack. "The type of file and attack are very similar to those concerning the recent incident, which implies that North Korea is engaged in the incident," the expert mentioned. He added, "It seems that the hacker intelligently hid malicious code in the Korean-language file of the control program before sending it to the corporation."

In the meantime, an increasing number of attempts to spread malicious code against social infrastructure and government systems have been detected in the second half of last year. Experts are warning that this could be a sign of massive cyber terrorist attacks, and the government has to activate full-scale security systems. The targets include not only government organizations and military facilities but also communications networks, traffic control systems, power plants and grids, and medical institutions.

As such, the Ministry of Science, ICT and Future Planning (MSIP) and the Korea Internet & Security Agency announced that they would keep strengthening their cyber security systems

throughout this year against advanced persistent threats (APT), and mobile and Internet banking fraud in the form of smishing and the like, and increasing security threats concerning the Internet of Things (IoT).

"This year, malicious code is likely to take advantage of more channels, including e-mails and SNS, to turn more computers into zombie PCs within a shorter period of time," they predicted, adding, "At the same time, IoT security threats are becoming a reality as IoT environments are set up and routers, home CCTV systems, and the like are exposed to the possibility of security breach."


In addition, attacks targeting domain name services are expected to continue when it comes to DDoS, and those aiming to cause system overload by multiple packet transmissions are predicted to become more and more frequent.

"Stricter standards are required for routers, home appliances, and so on in order to provide against the possibility," a representative from the ministry remarked, continuing, "Manufacturers will have to take information security into account from the very first steps of product planning and design."

Furthermore, government organizations such as the MSIP, the National Intelligence Service (NIS), and the Ministry of National Defense are looking into national IT infrastructure to check how prepared it is against cyber attacks and data breaches. In total, 292 items will be inspected, including traffic and energy control systems, information and communications networks, and government information services.

The NIS is going to be in charge of investigating government and public facilities. It is planning to focus on protection against cyber-terrorism in view of the recent attacks on the Korea Hydro & Nuclear Power Corporation.

The MSIP will organize inspection teams with experts in the private sector to cover 99 information and communications facilities in it, like data centers, shopping malls, mobile carriers, and portal sites.

The government is going to thoroughly and comprehensively examine the technical, physical and administrative security systems of the infrastructure elements, and advise immediate action if necessary to shore up its around-the-clock monitoring system. 

**Largest Vietnam Investor**

# South Korea Became Largest Foreign Investor by Investing US\$7.3 Billion in 2014



South Korea became the largest foreign investor in Vietnam in 2014, beating Japan.

The Vietnamese Ministry of Planning and Investment reported on Dec. 27 that a total of foreign direct investment (FDI) worth US\$20.23 billion was made this year in 54 provinces and cities in Vietnam. This figure is 19 percent higher than the initial FDI attraction goal.

By country, South Korea invested US\$7.32 billion, ranking first place by accounting for 36.2 percent of the total FDI from 60 countries, followed by Hong Kong with US\$3 billion and Singapore with US\$2.79 billion.

In particular, the Vietnamese investment by Singapore includes investment by Samsung's Singapore subsidiary, so the FDI by South Korean companies is estimated to be much larger than the official statistics.

Japan, which ranked first in Vietnamese investment last year, moved to fourth place.

By field, manufacturing and processing got a US\$14.49 billion investment, accounting for 71.6 percent of the total FDI, followed by US\$2.54 billion for real estate and US\$1.05 billion for construction.

By region, Thai Nguyen, which attracted the world's biggest mobile phone production facility of Samsung Electronics, recorded the largest FDI attraction of US\$3.35 billion.

The Southern economic capital city Ho Chi Minh, which ranked first place by attracting US\$3.1 billion investment in the previous year, was pushed to the second.


Exports by foreign investment companies amounted to

US\$101.59 billion, which was 68 percent of the total Vietnamese exports, leading Vietnamese economic growth.

Meanwhile, the Bank of Korea and the Financial Services Commission announced that real-time remittances are available between Korea and Vietnam from Dec. 15 last year. The service will be provided by KB Kookmin Bank, Korea Exchange Bank, Woori Bank, NH Nonghyup Bank, Hana Bank, Jeonbuk Bank, and Jeju Bank.

The new service takes the place of SWIFT, which can be used in most banks around the world, but takes a couple of days until remittance receipt. SWIFT is also prone to remittance failures caused by mistyping information, and it is not easy to check whether or not the remittance is received. Wire transfer service providers such as Western Union and Money Gram provide real-time services, but the fees are high, and real-time remittance checks are not available in most cases.

However, the new service that uses a cross-border payment and settlement system network allows real-time remittance checks and imposes lower fees. Specifically, the fee for sending US\$3,000 to Vietnam is 46,000 won (US\$41.85) via SWIFT, 84,000 won (US\$76.39) for wire transfers, but only 36,000 won (US\$32.65) maximum for the new service.

Only U.S. dollar remittances are available for now, and the maximum amount of a single remittance is US\$5,000. The financial authorities are planning to raise the limit while applying the system to other currencies such as Chinese yuan, Japanese yen, and those of Asia Payment Network (APN) countries like the Philippines, Malaysia, Indonesia, Thailand, and Australia. 



## Model Area of Deregulation

# IFEZ Aims to be Deregulated Outpost for Promoting Creative Economy, Services Industry



Yoo Jeong-bok, mayor of Incheon Metropolitan City, delivers his New Year's address at the "2015 Incheon Metropolitan City's Kick-off Meeting," which was held at Incheon Culture & Arts Center on Feb. 2.



view of Songdo, Incheon City.

The Incheon Free Economic Zone (IFEZ) has decided to focus its full attention on efforts at being designated as a "deregulation demonstration zone" both last year and this year. Also, with the goal to become an outpost of the services industry, the IFEZ will actively seek to improve investment conditions for businesses through innovative system reforms in the promising services industry, and revitalize the zone.

Last year, the IFEZ made an outstanding achievement. Its foreign direct investment (FDI) stood at US\$1.714 billion (1.87 trillion won) last year, reaching an aggregate amount of US\$6.769 billion (7.38 trillion won). The figure accounted for 95.7 percent of the total FDI amount of US\$1.79 billion (1.95 trillion won) in the 8 free economic zones of Korea. Compared with the nation's overall FDI amount of US\$19.003 billion (20.72 trillion won), it accounted for 9 percent, a 2.5 percent increase from 6.5 percent in 2013. All this means that the IFEZ has been a principal force in the advancement of not only Incheon but also Korea last year.

Daewoo International, one of the world's leading companies, decided to move its headquarters to Songdo International City. Other large companies, including ADT Caps, POSCO Engineering, and POSCO A&C also scrambled to move to Songdo. Moreover, as the University of Utah from the U.S. and Ghent University of Belgium opened their campuses in Songdo, it is becoming a global hub for education.

Yeongjong Island and Cheongna International City, which showed a slower pace of development than Songdo, also picked up momentum in development last year. Yeongjong Island is the first FEZ to receive approval for the development of a foreigner-only casino complex from the Ministry of Culture, Sports and Tourism. The casino proposal was made by LOCZ Korea, a consortium of China's Lippo Group and Caesars Entertainment of the United States. The island also strengthened the foundation for full-scale development by beginning the construction of Paradise City and getting an investment letter of intent (LOI) from Chow Tai Fook Enterprises Limited (CTF), one of the four largest conglomerates in Hong Kong. Moreover, in Cheongna International City, Hana Financial Group held a groundbreaking ceremony for building the Hana Finance Town. Also, it will be the IFEZ which pushes for the construction of the City Tower, a landmark of Cheongna,

after long struggles.

This year, the conditions to attract investment from companies are unfavorable, since the outflow of domestic capital into overseas markets has accelerated due to the increase in overseas direct investment from domestic companies. However, the government's strong drive for regulatory reforms and its measures to strengthen the promising service industry are expected to help the region become designated as a deregulation demonstration zone, and become the hub of the services industry, which the IFEZ is pursuing. Particularly, the government's deregulatory policies in the real estate market will be able to push the various development projects of the IFEZ.

Despite the achievements made last year, this year is crucial for the IFEZ. It could gain the momentum needed to rise as a new global business hub, such as Hong Kong or Singapore, but it could also become just one of the ordinary new cities if it doesn't make progress.

## IFEZ to Make Every Effort to Become Base for Creative Economy with Global Competitiveness

The IFEZ thinks that it lacked the effort to become a deregulation demonstration zone last year, which is needed to establish an attractive investment ecosystem. The revision bill of the Special

Act on Designation and Management of Free Economic Zones, which is closely related to the designation of the deregulations demonstration zone, was pending at the Trade, Industry & Energy Committee of the National Assembly. Also, the IFEZ concluded that it failed to respond actively to system improvements for invigorating the IFEZ's development and investment attraction businesses.

So with the goal of laying the foundation to be the base for the creative economy with global competitiveness, the IFEZ has decided to intensify efforts this year to become the hub city of global business, based on three policy targets. It includes the establishment of an advanced base for the services industry, the improvement of investment attractiveness by creating a top level investment environment, and the creation of a Green Smart City.

### **IFEZ Plans Designation as Deregulation Demonstration Zone to be Key to Growth**

The IFEZ accounts for 0.1 percent of Korea's land and 0.4 percent of its populace. In fact, the zone's small land mass and its small population make it an ideal place for the government to test out various deregulation projects, which will lead the Creative Economy. The IFEZ will make a full effort to be designated as the deregulation demonstration zone and be exempted from diverse restrictions applied to metropolitan areas, helping it secure the nation's new future growth engines and gain an innovation base to strengthen national competitiveness.

In particular, in order to revitalize the real estate investment and immigration system, the IFEZ will improve the system by lowering the investments to 500 million won (US\$458,631.44) from the current level of more than 700 million won (US\$642,084.02). This IFEZ effort for deregulation is brightening the outlook, along with the recent remarks by President Park Geun-hye at the New Year press conference, saying "The government will tackle regulation issues in the metropolitan area this year."

### **IFEZ to Push for Construction of Smart MICE Zone and Start Construction of Resort Complex by LOCZ**

Also, the IFEZ will focus on attracting service industries and setting up a Smart MICE Zone as part of its efforts. MICE stands for Meeting, Incentive, Convention and Exhibition. The MICE industry is related with diverse businesses including conventions, but there has been little industrial fusion among them. The Smart MICE Zone aims at going comprehensive from content and platform to networks. Moreover, the IFEZ will push ahead smoothly with the Build-Transfer-Lease (BTL) construction of the second phase of Songdo Convensia Convention Center, which will contribute greatly to strengthen the competitiveness in the MICE industry, and begin the construction after selecting a special purpose company (SPC) this coming June.

In order to reinforce the competitiveness of the casino resort complex in Yeongjong Island through the strategies of integration, composition, and enlargement, LOCZ will start the construction of the resort complex in the first half of the year. CTF, one of the four largest conglomerates in Hong Kong, will likely invest US\$1 billion (1.09 trillion won) in the island. The first phase of the construction of Paradise City will start in earnest, and will be completed in June 2017.

### **Songdo to Become Bio Mecca with World's Largest Biopharmaceutical Production**

With Songdo also fulfilling its role as the site of the forefront of biotechnology, it has secured the world's largest capacity for the production of biopharmaceutical products this year compared with its output as a single city. Accordingly, Songdo is pushing to become the hub city of the biotechnology industry in the world. It has the capacity to produce a total of 330,000 liters of biopharmaceutical products, far surpassing the 240,000 liters of San Francisco of the U.S. or 160,000 liters of Singapore. Along with that, Songdo is establishing its position as the Asian model of bio-industry in the 21st century, attracting


companies of the high value added industry in advanced countries, which has high technology barriers, including Sigma-Aldrich of the U.S.

### **Incheon City to Attract Investment for 8 Strategic Industries**

Incheon City will push ahead with a global growth base strategy for a new growth industry, including IT and BT, matching the "eight strategic industries" that are next-generation businesses of the city. The IFEZ will also actively attract investment in the electricity and electric sectors, which have a high growth potential, with the development of eco-friendly and future vehicles, the semiconductor-related sector that has a connection with the supply and demand of semiconductors, and the center for trade with the global and Asia Pacific region and the engineering service facilities.

Along with the construction project of waterfront businesses to establish a water circulation system connecting Songdo canals to lakes, the IFEZ will create wetlands on the western seashore where internationally rare birds can live, and strengthen its position as a global green city.

Also, in March the IFEZ will start the construction of rail bikes, observatories, and sky decks in the Seaside Park, which will be a landmark park of Yeongjong Island, and complete the construction by October. It will also set up "Jamjin Sunset Observatory" in the Jamjin-Muui Bridge, making it a tourist attraction. Moreover, Incheon City will offer various things for transfer passengers to see at Incheon International Airport.

An official from the IFEZ said, "IFEZ is at a crossroads. We need to double our efforts to continue development and attract investment. In order to make innovative improvements in the investment attraction system and establish one-stop services, the IFEZ will actively cooperate with the investment promotion agency of Incheon City, which was recently set up, and make all-out efforts this year to vitalize the economy of the city and make a leap forward together." 

## 2015 IDB-IIC Annual Meeting

# Relationship between Korea and Latin America Deepening



The annual general meeting of Inter-American Development Bank (IDB) and Inter-American Investment Corporation (IIC) will be held at BEXCO in Busan City from March 26 to 29 this year.

The event is co-hosted by the Ministry of Strategy and Finance and the Inter-American Development Bank (IDB). This meeting is the 56th Annual Meeting of the Board of Governors of the IDB and the 30th Annual Meeting of the Board of Governors of the Inter-American Investment Corporation (IIC). The Inter-American Development Bank (IDB) was launched in 1959 in Washington D.C. in

order to promote social and economic development and economic integration in Latin America based on contributions from donor countries. The organization had US\$128.8 billion in capital as of the end of 2013, and is planning to increase the amount to US\$171 billion by 2016.

Korea joined to the IDB in 2005 following Japan, which joined the IDB in 1977, when it promised to provide trust funds of US\$180 million for 10 years to eradicate poverty.

The incumbent president of the IDB is Mr. Luis Alberto Moreno from Columbia. The organization includes representatives

from 28 member countries in the continent and 20 outside of it.

Korea was determined to be the host for this year at the annual meeting held in Calgary, Canada in March 2011. In October 2012, the IDB visited Korea and chose Busan as the venue two months later.

This year's IDB annual meeting is the first 2015 IDB-IIC Annual Meeting outside of Latin America since the one in Japan 10 years ago. Also, it will be the biggest Latin American conference to commemorate the 10th anniversary of Korea's accession to the IDB. The Korean government is expecting that it will be a cornerstone for greater cooperation between Korea and Latin American countries.

Minister of Strategy and Finance Choi Kyung-hwan recently met with IDB President Luis Alberto Moreno in Seoul and asked for his cooperation to that end. "We will try to share our economic develop-

Major Financial Organizations for Regional Development

(Units: US\$100 million)

	IDB	ADB	AfDB	EBRD
Year of Establishment	1959	1966	1964	1991
Capital (upon increase)	1,710	1,647	1,069.5	432





Luis Alberto Moreno (left), president of the Inter-American Development Bank, speaks with Choi Kyung-hwan (right), minister of Strategy and Finance of South Korea.

ment expertise with Latin American countries by means of trust funding projects, knowledge sharing projects, etc.," he added. "The annual meeting scheduled for March in Busan will be an important venue for closer cooperation between the two regions," the IDB president said in response.

To this end, the annual meeting comes with a variety of events such as the Korea-Latin America Business Summit and Knowledge Sharing Forum. These will lead to the creation of valuable economic opportunities for both Latin American and Korean entrepreneurs.

Latin America is home to approximately 600 million people, and the number of middle-income households is increasing at a rapid pace there, meaning the continent can be an El Dorado for Korean companies. The middle-income class accounted for 30 percent of the pop-

ulation in 2009, catching up with the ratio of the less privileged. Specifically, the ratio of the middle class increased from 15 to 30 percent between 2003 and 2009, while that of the less well-off fell from 44 to 30 percent.

Latin America has greater purchasing power than other emerging markets. Their per-capita GDP averages are US\$9,700 vs. US\$5,100. This has led to increasing consumption of automobiles, consumer electronics, and the like. Samsung Electronics' smartphone market share in the continent rose from 20 percent or so to over 50 percent between 2011 and 2013.

Korea, in the meantime, has recorded a trade surplus with Latin America for 27 consecutive years since 1987. In 2013, the surplus reached US\$18 billion.

Latin America is characterized by its abundant natural energy resources, growth potential, and business opportunities. It

represents 44 percent of global lithium production along with 42 percent of copper, 14 percent of iron ore, and 18 percent of zinc. Venezuela and Argentina rank first and third in terms of oil and shale gas deposits, respectively. Economic cooperation between Korea and Latin America is shifting its focus away from mineral and petroleum development. Cooperation is shifting to infrastructure construction, power and energy efficiency improvement, the information and communications industry, agriculture, biotechnology, and national defense. This lines up with an assessment from the United Nations, which estimates that an annual average investment of US\$55 billion is estimated to be required for infrastructure development in Latin America by 2030. The value of construction orders that Korean builders have already obtained there skyrocketed from US\$800,000 to US\$3.3 billion between 2003 and 2013. Also, Brazil and Argentina are two of the world's top three soybean growing countries, and Korea needs a lot of soybeans. Finally, half of the world's 12 most biodiverse countries are located in the continent, rich resources for Korea's growing biotechnology industry.

At present, about 50,000 Koreans are living in Brazil, and the number amounts to approximately 22,000 in Argentina, 13,000 in Guatemala, 12,000 in Mexico, 5,000 in Paraguay, and 28,000 elsewhere

Korea's Trade with and Direct Investment to Latin America

(Units: US\$100 million)

Classification	'05	'06	'07	'08	'09	'10	'11	'12	'13
Trade	220	303	371	470	384	508	603	565	547
(Balance)	80	109	145	195	151	215	200	170	180
Direct Investment	6	11	12	21	10	22	26	33	32

Source: Korea International Trade Association and Export-Import Bank of Korea.

in Latin America. More and more Koreans are doing professional jobs in mainstream society there.

Since Korea's accession to the IDB in 2005, annual bilateral trade has increased from US\$22 billion to US\$54.7 billion until 2013. Korea's direct investment in Latin America has gone up from US\$600 million to US\$3.2 billion during the same period, too.

### Significance and Anticipated Effects

This year's IDB annual meeting, which is expected to be attended by over 3,000 persons, is the largest Latin America-related event ever to be held in Korea.

Anticipating that the meeting will create a Latin American boom in Korea, the Korean government is preparing various events and programs such as summit meetings, conferences, meetings between high-ranking government officials, and cultural and academic activities.

From Korea's perspective, Latin America is a highly important strategic market with a GDP of US\$6 trillion and annual economic growth rate of 6 percent. Also, its per-capita GDP is as high as US\$10,000, and rich natural resources guarantee high growth potential. The ratio of the continent's GDP to the global total increased from 5.0 percent to 7.8 percent from 2003 to 2013.

During the period, the ratio of trade with Latin America to Korea's overall international trade volume expanded from 3.6 percent to 5.1 percent as well.

The Korean government is working on the creation of more business opportunities during the occasion by means of business meetings, industrial exhibitions, business tours, and other activities.

### New Opportunities for Korean Businesses

In the meantime, an increasing number of Korean banks are focusing on Latin American markets. In particular, they are paying particular attention to Mexico as the passage between the Latin American continent and the United States. Shinhan Bank, which opened an office in Mexico City in 2008, is planning to set up a


local subsidiary in March this year. Korea Exchange Bank is going to open an office next month.

Mexico's importance for them is supported by the presence of manufacturing facilities of Korean companies such as Samsung Electronics and LG Electronics. Kia Motors is building its plant there, and Hyundai Motor Company recently announced a Mexican plant construction plan, too.

Brazil is another Latin American country that more and more Korean banks are interested in these days. At present, a number of Korean firms are working with Hyundai Motor Company, POSCO E&C, and so on in Brazil, which shares a border with most Latin American countries, and thus can be a linchpin of local business expansion. Wooribank opened its local subsidiary in Brazil six years ago. It is currently doing business with Korean firms in the country, but is planning to

make use of the market as a starting point for its businesses in Chile, Argentina, and other neighboring countries.

Korea Exchange Bank is trying to expand its sales network by means of its Chilean office opened in 2008. The Industrial Bank of Korea is looking to find its way into Latin America on a strategy partnership with Santander Bank, which is doing successful business in the continent.

The Ministry of Trade, Industry and Energy also announced recently that it would accelerate its cooperation with Latin America by making use of FTAs and helping 2,400 domestic enterprises trade their products with this region. The Ministry is planning to sign FTAs this year with the eight member countries of the Central American Integration System (SICA) – Panama, Costa Rica, El Salvador, Guatemala, Nicaragua, the Dominican Republic, Belize, and Honduras. 

## Outline of 2015 IDB-IIC Annual Meeting

- Official Title: 2015 IDB-IIC Annual Meeting of the Boards of Governors
  - \*Inter-American Development Bank (IDB): Established in 1959 for the promotion of economic development in Latin America
  - \*Inter-American Investment Corporation (IIC): Established in 1984 in the IDB Group for financial support of small firms
- Period and Venue: Mar. 26 (Thu) to 29 (Sun), 2015, BEXCO Convention Center, Busan City
- Attendants: Approximately 3,000 including the financial ministers and central bank governors of the 48 IDB member countries, high-ranking government officials, representatives of international organizations, entrepreneurs, and press
- Programs: Main event Mar. 28 to 29, additional events like Korea-Latin America Business Forum and Knowledge Sharing Forum Mar. 26 to 27, cultural and academic activities

### < Program Schedule >

3.26 (Thu)	3.27 (Fri)	3.28 (Sat)	3.29 (Sun)
Additional Events	Main Conference		
Business Forum	Knowledge Sharing Forum	Business Forum	Prior Plenary Session
			Breakfast Meeting
Reception	Business Forum Banquet	Governor Banquet	Opening Ceremony
			Plenary Session
			Closing Ceremony
			Banquet

## Host City

# IDB's Annual General Meeting to Take Place in Busan

The 2015 IDB-ICC meeting will be held in Busan, Korea. Minister of Strategy and Finance and Deputy Prime Minister Choi Kyung-hwan visited Busan City in January and signed an MOU with Busan Metropolitan City Mayor Suh Byung-soo, which included a cooperation plan for successfully hosting the meeting.

Requesting active cooperation from the city, Choi expected that the meeting would contribute to Busan seeking new ways to boost the local economy. In response to it, Mayor Suh promised active support and cooperation for the success of the meeting in the host city, referring to the ITU Plenipotentiary Conference and the ASEAN-Republic of Korea Commemorative Summit, which were hosted successfully in Busan last year.

Busan is South Korea's second largest metropolis after Seoul, with a population of approximately 3.6 million. It is the world's fifth busiest seaport and the central city of marine logistics in Northeast Asia.

## Financial Hub of Northeast Asia

Busan is becoming a financial hub in Northeast Asia through the establishment of financial infrastructure like the Busan International Financial Center (BIFC) and a derivatives R&D center. Busan is focusing on specialized products, including marine finance connected with shipbuilding and the marine transportation industry in which Korea holds a dominant position, and derivatives finance which is based on the Korea Exchange in the region.

In 2009, Busan was designated as a financial hub by the central government. There are 6 public institutions, including the Korea Exchange, and large financial institutions and facilities, including the Bank of Korea and Korea Technology Finance Corporation, located in the BIFC.

The world is also beginning to eye Busan as a financial hub of Northeast Asia. Z/Yen, a global consulting group in the U.K., has recently stressed in a research paper called "Maritime Financial Centers" that the world needs to pay attention to Busan as a financial city.

In the paper, Z/Yen said, "Busan is located in the center of the world's sea lanes, which connect Russia, the U.S., and China. Just like the world's major port cities have developed into the center of marine finance based on a real economy, Busan possessing the world's fifth container seaport will become the world-class center of marine finance in no distant future."

In particular, Busan ranked 28th among 83 cities that were subject to an evaluation for the Global Financial Centers Index (GFCI), published in September last year by Z/Yen. With Busan having ranked within the top 30 for two consecutive years after



Nurimaru APEC House in front of Gwanggan Bridge, two famous landmarks in Busan.


March last year, the city has confirmed its stature as a global financial city.

In terms of competitiveness, Busan is ahead of other internationally renowned financial cities such as Paris (31st), Beijing (32nd), and Osaka (33rd). Also, the city ranked 10th in the Asia-Pacific region, overtaking Osaka and Beijing. Therefore, Z/Yen expects that Busan will expand its stature in the world beyond the Asia region in the future.

## International Business Conference City

Based on the world-class exhibition and convention centers, including Bexco and Nurimaru, Busan has hosted important international conferences, exhibitions and conventions successfully, including the 2015 APEC Summit (20,000 participants), the 2010 G20 Chancellor's Meeting (1,000 participants), the 2011 High Level Forum on Aid Effectiveness (3,000 participants), the 2012 Lions Club International Convention (55,000 participants), the 2014 ITU Plenipotentiary Conference (300,000 participants), and the 2014 ASEAN-Republic of Korea Commemorative Summit (3,000 participants).

According to the "2013 Global Ranking of Cities Hosting International Meetings" report published by the Union of International Associations (UIA), Busan stood in 9th place among 1,465 cities in 174 countries surveyed, while grabbing the 4th spot in Asia.

Busan hosted a total of 166 international meetings in 2013, reaching the number four ranking in Asia following Singapore, Seoul, and Tokyo and making it within the top 10 in the world along with Paris and London. Notably, Busan is the only Asian city among the top 10 cities that is not a capital. 



## Economic Outlook 2015

# Korea's GDP Expected to Grow 3.4% in 2015 amid Concerns over Increasing Deflation

Most economic research institutes in Korea are negative about the recovery of the Korean economy for 2015. They are predicting that the pace of the recovery will be limited, with the global economy still mired in the current recession.

The plummeting oil prices as of late are fueling the financial volatility in oil-producing countries such as Russia. China's economic indices are deteriorating, and the Federal Reserve Bank of the United States has signaled an interest rate hike. Above all, the global economy has shown a less-than-expected growth of 3 percent or so during each of the past three years.

The LG Economic Research Institute forecast in its recent report that the growth of the Korean economy is likely to be rather slow despite the low oil prices, and it is expected to grow 3.4 percent in 2015, just 0.1 percentage points higher than in 2014. "Time will be taken until it retains a 4 percent annual growth," the report read, adding, "Those economies highly dependent on export and manufacturing will have to suffer more from the recession for a while, although countries with large domestic markets like the U.S. will be able to recover based on domestic demand growth in the service sector." It continued, "Korean exporters, in particular, will be increasingly challenged by Chinese and Japanese players during the course of 2015, and the limited export-based income growth will hamper the recovery of con-

sumption and investment."

The Korea Institute for Industrial Economics and Trade (KIET) suggested a GDP growth rate of 3.7 percent. According to the institute, Korea's exports are estimated to increase from US\$578.1 billion to US\$604.3 billion between 2014 and this year. It mentioned the gradual recovery of the global economy as a reason and added that the imports will increase 6 percent or so year-on-year to US\$566.9 billion.


"Private consumption growth for 2015 is estimated at around 3 percent, as the government's expansionary fiscal policy, improvement in real purchasing power from price stability, and increase in the number of employees stimulate private consumption," it explained, continuing, "Also, the capital expenditure growth is expected to reach 5.5 percent, 0.2 percentage points higher than in the previous year, based on government policy and export growth, while construction investment increases from 2.4 percent to 2.8 percent thanks to the increased budget for SOC."

The POSCO Economic Research Institute estimated the annual growth rate at 3.7 percent, too. "The export growth rate is expected to edge up to 5.9 percent, led by the exports to the U.S., but the domestic consumption growth will be limited to less than 3 percent, with the real wages stagnated and household debts on the rise," it pointed out. According to it,

the Korean currency is predicted to remain depreciated until the first half of 2015 due to concerns over an upward adjustment of the interest rate. But the current account surplus will cause the won to appreciate in the latter half. It also suggested a capital expenditure growth of 7 percent, which is not that high, considering the base effect, along with a construction investment growth of below 2 percent attributable to the still-struggling civil engineering sector.

"The trend of low growth is likely to continue for a while, unless Korea finds new growth drivers, because of structural factors like the decrease in the number of the economically active population and the imbalance between domestic consumption and export," it warned, adding, "Looking into the domestic market, it can be found that today's conditions are very similar to those of Japan during the start of its long-term recession, and household debt is snowballing for housing rents, whereas their real wages have yet to recover to a pre-crisis level."

It said that private consumption growth would be improved from a year ago to reach 2.9 percent and the consumption demand would be able to increase, if gradually, on the condition that increasing exports have a positive effect on corporate profitability and employment. The consumer sentiment recovery is likely to be led by the improving conditions in the housing market as well although it might



be affected by an interest rate hike by the Fed predicted for the third quarter.

“The unemployment rate is slightly go down to 3.3 percent with companies’ sales and construction investment increasing and the inflation rate is estimated at 2.5 percent on annual average amid the depreciation of the won, increase in consumption demand following a slight recovery of the domestic market and increase in the prices of services,” it predicted, pointing out, “These days, more and more companies are hoarding cash due to future uncertainties, and this has caused a slower growth of the domestic demand compared to export.” It also mentioned the structural factors to hinder the growth of the domestic market including the decline in the economically active population predicted to start from 2017.


The Hyundai Economic Research Institute, in the meantime, said that the service and manufacturing sectors will have difficulties in increasing their outputs, whereas the construction sector is likely to recover at a relatively fast pace. It also mentioned that some industries in the face of a structural recession will have to struggle for survival this year.

The Hana Institute of Finance picked the depreciation of the yen, China’s concentration on qualitative growth, accelerating shale gas development and continuation of the slow growth of the Korean economy as its four main risks for this year. “The domestic consumption market

is expected to show a gradual recovery in 2015 based on the government’s policy for demand stimulation, improving trade conditions, increase in asset prices, increasing number of inbound Chinese tourists, etc,” it explained, adding, “Nevertheless, the skyrocketing household debt and fast aging of the population have to be tackled first if the recovery is to be achieved.”

Recently, the Bank of Korea adjusted both the GDP growth and consumer price inflation estimates for this year downward. Concerns are growing over the possibility of deflation.

The central bank lowered its GDP growth estimate for 2015 from 3.9 percent to 3.4 percent on Jan. 15. It added that the percentages are likely to be 3.7 percent and 3.3 percent for the first and second halves, respectively. At the same time, it adjusted its inflation estimate from 2.4 percent to 1.9 percent.

These figures are lower than those recently provided by the government and economic research institutes. In December last year, the government suggested an annual economic growth forecast of 3.8 percent and an inflation estimate of 2.0 percent. The Korea Development Institute’s predictions were 3.5 percent and 1.8 percent each. 

**Prospects for Manufacturing and Exports**

# Forecast to Be Still Sandwiched between China and Japan



Korea's manufacturing sector is expected to experience a downward trend on the whole this year owing to unfavorable factors such as the continuing weak yen, the effects of the U.S. quantitative easing policy, China's economic slowdown, the sluggish Eurozone economy, and geopolitical instability. In particular, China is narrowing the gap with Korea in technology with a bold investment in research and investment to cultivate new industries. China is also strengthening its policy to grow its IT, biotech, car, and energy industries. Therefore, there is a concern about a decrease in Korean products' share of the export market.

Moreover, the nation's economic recovery is likely to be slower this year, which is raising more concerns. The production rate is forecast to increase slightly, due to contraction in domestic demand and exports. In fact, manufacturing output rose about 5 percent in the first half of last year compared to the same period in 2013. However, the production rate fell by 2 percent in the latter half, leading to around 3 percent, which is lower than the service

sector. In particular, as inventory and shipments are in a stalled growth mode as of the fourth quarter of last year, a slowdown in economic recovery is expected.

On the other hand, exports of services, which normally belong to the non-tradable sector, are rising, and thus services represent an increased share of the total exports. The upward trend is likely to continue in the future. In particular, the Korea-China Free Trade Agreement is projected to facilitate Korean companies' entry into the Chinese market for law, construction, retail, and entertainment.

Hyundai Research Institute predicts that the Korean manufacturing sector will continue to be sandwiched between Japan and China. The revealed comparative advantage of Korea, China, and Japan shows that the gap between Japan and Korea has slightly narrowed, but Korea still lags far behind Japan in competitiveness. On the other hand, China has greatly narrowed the gap with Korea.



As a result, Korea's 7 major items (cars, shipbuilding, machinery, steel, IT, petroleum products, and petrochemicals) accounted for approximately 4.7 percent of the global export market in 2013, a slight increase from the 3.4 percent of 2000. However, China's share increased dramatically from 2.2 percent to 11.7 percent over the same period. The number for Japan was 5.3 percent, higher than the figure for Korea. A decrease in the gap between Korea and China in technology is likely to aggravate the problem in 2015.

On top of that, a drop in price competitiveness resulting from a weak yen is expected to deal a serious blow to exports. The won-yen exchange rate is 1,005 won per 100 yen as of January of 2015, a 38 percent appreciation of the won compared to the value of 1,391 in 2011.

The institute estimates that if the exchange rate reaches 950 won per 100 yen this year, Korea's total exports will drop 5.8 percent. In the case of 900 won per 100 yen, the number is likely to fall by 8.2 percent. In particular, exports of steel, petrochemicals, machinery, and IT are more likely to be greatly reduced.

Related to this issue, an analyst at LG Economic Research Institute remarked, "Amid the trade contraction stemming from global economic slowdown, competition intensified, and won appreciation continued to the fourth quarter of last year. In particular, the manufacturing sector performed poorly." The analyst added, "This year is expected to see increased exports originating from a weak won and a reduction in production costs caused by a sudden drop in oil prices. Nevertheless, the volume of global trade is not expected to increase a lot. So, the nation's export recovery is likely to be slow."

#### Proportion of Core Industries in Exports Likely to Decrease Slightly

According to a report on the prospect for the nation's economy and industry in 2015 published by the Korea Institute for Industrial Economics and Trade (KIET) in November 2014, 12 major industries (cars, shipbuilding, machinery, steel, petrochemicals, oil refining, textiles, household appliances, IT devices, displays, semiconductors, and food and beverage) are expected to make up 77.9 percent of the total exports this year, down from 78.8 percent in 2014.

Overall exports of core industries are likely to shrink, but outbound shipments to shipbuilding and semiconductors are expected to grow more than 5 percent. These areas are projected to lead growth in the manufacturing sector. In addition, exports of display are forecast to show an upward trend this year, following a downward trend since 2012.

Outbound shipments to the IT and auto industries are unlikely to post a large-scale increase owing to rival companies' offensives to counter Korean firms. In particular, the share of imported cars and major IT consumer products in the domestic market is likely to rise sharply.

A difference in the direction of the construction and shipbuilding industries is also expected, after showing poor performance. The expansion of orders and an increase in the social overhead capital budget are predicted to create opportunities for the con-

struction sector to escape from a prolonged recession. The shipbuilding industry, on the other hand, is likely to suffer heavily due to continued oversupply and the acceleration of great inroads into the global market by Chinese shipbuilders.

#### China, Weak Yen, Shale Gas Threaten Korean Manufacturing Sector

The report also predicts that fierce competition between Chinese and Korean manufacturing companies will have a negative influence on Korea's exports of major items to China, aside from steel, semiconductors, and cars. The local textile and household appliance industries are expected to face more intense competition from foreign companies this year. Competition in petrochemicals, machinery, shipbuilding, oil refining, display, and IT devices is likely to heat up to a certain degree.


With regard to exports to China, the report said, "Semiconductors and cars made by Korean firms are differentiated from those manufactured by Chinese companies. Korean firms are also ahead of Chinese counterparts in competitiveness. So, exports to China are less likely to be affected." The report also added, "Competition between Korean and Chinese companies for petrochemicals, machinery, shipbuilding, oil refining, food and beverage, display, and IT devices mainly with textiles and home appliances is expected to intensify in 2015. Therefore, stiff competition is likely to have a relatively huge negative effect on exports of those items to China."

The steel and petrochemical industries are expected to witness sluggish demand resulting from China's slow growth and deteriorating profitability in exports caused by oversupply in the Northeast Asian market. Hence, the oil refining industry is likely to continue to show a downward trend in exports in 2015. Although exports of petrochemicals are projected to rise, contraction in production and demand is expected, arising from a decrease in production costs.

Hana Institute of Finance predicts that the shipbuilding, display, steel, oil refining, and chemical industries will suffer, as China has changed its course from qualitative to qualitative growth. Furthermore, an increase in the production of shale gas by U.S. companies will inevitably have a negative impact on the local steel, oil refining, and chemical sectors.

Related to this issue, the institute said, "Special attention is needed for the steel, oil refining, and chemical industries, since those sectors are exposed to China risk and shale gas risk."

In addition, the auto, display, electronic component, and steel industries were mentioned as the ones that will hit by a weak yen. The institute pointed out, "The auto and display sectors are likely to be negatively affected by a rise in imports of Japanese products. The electronic component and steel industries are also expected to suffer due to Japanese companies' improved competitiveness in the global market."

Meanwhile, KIET anticipates that the continued weak yen will have a negative influence on exports of oil refining and automobiles this year. The textile, consumer electronics, shipbuilding, and food and beverage sectors are also likely to be affected by a weak yen to a certain extent. 

## Industrial Outlook for 2015

# Special Attention Needed for Steel, Oil Refining, and Chemical Sectors

### ICT & Electronic Industry

Due to the rise of China, tension is expected to continue in the domestic electronics industry this year. Closing a technology gap between China and Korea in the electronics industry is one of the factors restricting domestic products' exports. According to data from the Korea Foreign Trade Association, from January to August in 2014, electronic exports were up only 2.1 percent from the same period a year earlier, while LCD exports were down 8.3 percent. However, the report said that the Information Technology (IT) manufacturing industry, which recorded 4.5 percent in export growth, is expected to show stronger growth than the non-IT sector manufacturing industry, including food and oil refining, which grew by 2.3 percent.

Exports of the electronic electricity products, such as smartphones and home appliances, might show a slight increase due to improving demand in advanced countries, excluding China. However, owing to the fierce competition with China and the lower unit price, only mass-produced smartphones could grow, while market saturation in advanced countries and a growing number of Chinese manufactures might slow the growth of smartphones. Therefore, domestic smartphone producers appear to focus on improving profitability by diversifying products, including mass-produced smartphones, with affordable prices, rather than increasing the market share due to a slowdown in high-end product growth.

The semiconductor industry has a bright prospect, as the server market is growing and the demand for new applications, such as wearable devices, is increasing, despite market saturation in the computer and smartphones sectors. The memory semiconductor market is forecast to continue to grow, since the overall DRAM demand has skyrocketed, as newly-released smartphones this year expanded its memory storage. Also, the demand of NAND flash for SSD products has increased.

The display industry, which has recorded negative growth, is also expected to grow by 3 percent in exports, as its supply and demand situation has recovered. In the LCD market, exports of large panels for large-screen TVs and small panels for tablets and computer monitors will go down by 0.4 percent and 7 percent this year, respectively, compared to last year. Also, it is hard to expect



the boom in the past next year as well.

While exports in home appliances, such as TVs, will show a slight decrease in the first half of the this year due to the effects of the World Cup and Olympics, it is expected to gradually recover in the second half of the year owing to the supply expansion of UHD and OLED TVs and the launch of quantum dot TVs.

The Internet of Things (IoT) is likely to face new opportunities in growth. The IoT refers to technology and services to interact with information, connecting humans to objects and objects to objects. According to Gartner, a market research institution, the number of devices connected to the Internet this year is expected to hit the 4.9 billion mark, 30 percent increased compared with the previous year.

### Automotive Industry

The global auto industry this year is showing signs of a moderate recovery as the economy in the U.S. and Europe is picking up and China and India are experiencing steady economic growth. However, two factors are affecting the South Korean auto industry. The first is the aggressive marketing strategies of Japanese automobile manufacturers backed by a weak yen. The second is an economic slump in oil-producing countries, including Russia and the Middle East, from the drop in oil prices. Therefore, the South Korean auto industry is expected to show a slight increase this year based on domestic and foreign production and export.

Owing to a steady increase in exports to North America, tariff reductions from the FTA, and the increasing demand of the replacement of cars 10 years or older, the domestic automotive industry this year will see a slight increase in domestic production, exports, and domestic demand overall.

In particular, exports to North America until October last year were up 14 percent from the same period a year earlier, maintaining its growth. Also, with tariffs on automobiles additionally being reduced under the Korea-EU FTA, beginning from July 1 last year, its exports is likely to grow drastically this year.

According to the Ministry of Trade, Industry and Energy (MOTIE) and Korea Automobile Manufacturers Association (KAMA), the domestic production of automobiles will be up 1.1 percent to 4.5 million units from last year due to the rise in



exports. Exports are likely to increase by 1.6 percent to 3.1 million units compared to 2014. The amount of exports will grow by 3.2 percent to US\$51.2 billion (55.17 trillion won). For production abroad, it is expected to be up 4.5 percent to 4.6 million units this year, thanks to the expansion of the production capabilities of existing plants last year.

For automobile parts, despite the economic slump in emerging countries and the slowdown in economic growth in the European Union, exports are likely to increase by 1.9 percent to US\$2.7 billion (29.09 trillion won) compared with last year. This increase will likely be due to the growth in the automotive industry in the U.S. and China and effects of the FTA with major exporting countries.

Although overall consumer confidence shrank, domestic demand will hit a record high of 1.65 million units, a 2.5 percent increase from last year, due to the release of new cars and the demand of the replacement of 7 million older vehicles, the lower individual consumption tax, the release of eco-friendly vehicles, and the expansion of its support.

Import of cars in the domestic market is highly likely to continue to grow this year. According to the MOTIE and KAMA, sales of imported cars in 2015 will increase by 19.2 percent to 250,000 units. Therefore, the domestic car industry is expected to struggle this year.

Also, the trend that tightens regulations on carbon dioxide (CO<sub>2</sub>), which is closely related to fuel efficiency, still gets a lot of attention. The automobile manufacturers are expected to release more eco-friendly vehicles, such as an electric vehicle (EV) and a plug-in hybrid electric vehicle (PHEV), as one of the solutions of the trend. Meanwhile, the popularity of compact SUVs and CUVs will continue to endure in 2015.

## Shipbuilding Industry

With the oversupply in the market continuing and Chinese shipbuilding companies accelerating to make inroads into the global market, the shipbuilding industry is expected to continue to face considerable difficulties this year. In particular, there are concerns over a decrease in orders of general purpose ships and marine plants due to the economic recession in Europe and the negative effects from low oil prices. However, as a series of the high-priced marine plants ordered will be delivered this year and the cost increase of ships last year shall be reflected in sales, the amount of exports is likely to increase.

Global and Chinese economic growth is expected to slow down. A representative from the Korea Investors Service (KIS), the domestic credit rating agency, said that it is hard to expect a demand increase in building new ships in accordance with expansion of trade volume. And, the agency expects only the general level of the replacement demand due to the strengthened environ-



mental regulations.

As oil prices have recently slumped due to fierce hegemonic competition in the oil market between the U.S. and Saudi Arabia, the order condition of marine plants, including deep-sea drilling facilities, is getting worse. There is also the possibility that the existing amount of orders will delay in delivery. Therefore, it would put a working capital burden on the shipbuilding industry, the KIS representative explained.

The estimated orders of the top three shipbuilders this year are likely to be up 16 percent to between US\$33.8 to 38.5 billion (36.44 to 41.51 trillion won) compared with last year. However, a triple handicap, such as a slump in the marine plants industry, poor results, and fierce competition, will remain in the industry. So, there is no change in its difficult circumstances. Hyundai Research Institute expects that the amount of work of the domestic shipbuilders will drop down 5 percent to 8.87 million compensated gross tonnage (CGT) this year from 9.37 CGT last year.

In particular, Japan is increasing the investment in its shipbuilding industry, backed by the weak yen. China is improving its competitiveness in building general purpose ships, including oil tankers, bulk carriers and container ships, by accumulating its experience. Therefore, domestic companies will face greater difficulties.

However, there is also the possibility of profit improvements, as an order of liquefied natural gas (LNG) carriers for shale gas is increasing rapidly and an order of floating liquefied natural gas (FLNG) vessels is increasing as well. Considering the fact that shale gas exports from the U.S. will begin in earnest from the second half of 2017, its orders begin in earnest from the end of 2014. As of the middle of October last year, the amount of shale gas approved in North America amounted to 4.9 million tons from the four projects. Accordingly, it generates the demand of 108 LGN carriers. Until now, 20 LGN carriers were ordered, so the rest will be ordered in 2015 to 2016.

Interest in the FLNG, which can reduce development costs by 30 percent in gas production than land-based gas plants, is steadily increasing. However, it is not as fast as expected.

Meanwhile, the demand for eco-ships is on the increase, and this is where the domestic shipbuilding industry has expectations for growth. Since the Korean shipbuilding industry outperforms Chinese companies in eco-ship technology, the domestic shipbuilders can have competitiveness in the global shipbuilding industry based on its superiority in eco-ship technology.

## Steel Industry

The steel industry is expected to continue to suffer from a slump this year as well. The annual average price will decrease due to continuous oversupply in the global market. The demand for steel products in China, which was described as a "black hole" of steel and served as the market of the world, will be up within 1





percent, a similar level of last year. Therefore, there are dark shadows on the export front.

A Korea Ratings Corp. representative said, "There is the possibility that there will be a slight recovery in the domestic steel market situation compared with 2014. However, its overall market is likely to remain slow." The business in the construction industry, which is one of the most important steel-using industries, is picking up. But the oversupply of steel in the global market and fierce competition over prices between steel manufacturers are a drag on the growth of steel manufacturers.

Also, since the global financial crisis, China's market share in the global export market has been surging drastically, while its market shares of Korea and Japan have continued to decline. With 2013 as its peak, Korea's market share in the global market is showing signs of dropping.

The World Steel Association expects that the global steel demand this year will be up only 2 percent to 1.594 billion units from last year. The figure is somewhat different from the prospect announced by the Korea Iron & Steel Association (KOSA) in April last year. The KOSA forecast that the global steel demand in 2015 will increase by 3.3 percent from the previous year. Considering the fact that the global steel demand in 2013, which suffered from the continuous recession in the steel market, remained at 3.8 percent, it is easy to figure out how negatively the steel industry views this year.

The main reason for the lower demand prospects is China's growth slowdown. The KOSA said that the demand for steel products in China increased by 6.1 percent in 2013 and 1 percent in 2014. Also, it expects that its demand in China will decrease to 0.8 percent this year. Since Chinese steel companies are expected to turn to overseas markets to make up for falling demand in the oversupplied domestic industry, they are likely to have fiercer competition with Korean steel manufacturers for overseas exports.

The domestic steel market will grow only 2 percent compared with last year. The stagnation of the front industries, including the shipbuilding and the construction industries, is one of the factors that diminish the demand for steel products. Even though the construction sector is starting to look up and the machinery manufacturing sector is showing a slight increase, the auto manufacturing and the shipbuilding sectors are expected to remain at the same level as last year.

For exports, there are continuing causes for concern, including China's continuous expansion of supply, fierce competition from the weak yen, and trade regulations. However, its exports will grow to the 2 percent level due to the expansion of overseas material supply. Imports are expected to remain at the same level as last year.

Hana Institute of Finance expected that the steel industry will face the toughest year ever, since all the risks, including the weak yen, a paradigm shift in the Chinese economy, and the shale gas expansion are concentrated on this industry.

## Machinery Industry

The machinery industry this year is expected to be some-

what better than last year, as the production, exports, and domestic demand are recovering slowly, backed by additional demand recovery in global markets such as the U.S. However, several risk factors could still limit this recovery trend, including the continued weak yen, low oil prices, and shrinking investment from oil-producing countries.

The Korea Association of Machinery Industry (KOAMI) expects that in 2015 the production of the five machinery industries, which are general machinery, fabricated metal, electric machinery, precision machinery, and transport machinery (excluding ships), will amount to 467.4 trillion won (US\$433.54 billion). This is an increase of 4.5 percent from last year. It also expects that its exports will total US\$194.4 billion (209.58 trillion won), and imports US\$107.7 billion (116.15 trillion won), which are an increase of 5.2 percent and 9.6 percent from last year, respectively. Its trade surplus is expected to amount to US\$86.66 billion (93.43 trillion won), too.

Among these industries, the production of general machinery is expected to reach 104.6 trillion won (US\$97.02), an increase of 3 percent from last year, while its exports and imports will total US\$47.48 billion (51.19 trillion won) and US\$37.54 billion (40.47 trillion won), an increase of 4.9 percent and 9.7 percent from last year, respectively. Its trade surplus is likely to be US\$9.94 billion (10.72 trillion won).

First, exports to advanced countries, including the U.S., Europe and Japan, are expected to pick up. However, if the yen continues to stay low, competition with Japanese products in the overseas market will intensify. Also, the recent plunge of international oil prices might shrink the investment of oil-producing countries in the Middle East once again.

According to a quantitative analysis from KOAMI, when there is no other cause of change, if the international oil price goes down by 20 percent, exports of general machinery will decrease to US\$46.3 billion (49.92 trillion won) from the initial prospect of US\$47.5 billion (51.21 trillion won). If the exchange rate of the yen and the dollar goes up by 20 percent, the industry's exports could plunge to US\$42.2 billion (45.5 trillion won).

## Petrochemical Industry

The domestic petrochemical industry this year is expected to worsen due to three major factors. The first is an economic growth slowdown in China, the largest export market in the world. The second is a decrease in imports from an increase in the self-sufficiency of petrochemical products. And the third is fierce com-



petition over prices owing to an increase in the market share of products from the Middle East. However, as the price of naphtha, a basic raw material, is decreasing along with a drop in oil prices, the cost competitiveness of petrochemical products will improve. Also, the domestic demand and exports will see a slight increase from the demand recovery of the domestic front industries and the extension of production facilities.

By product group, due to a delay in the demand recovery of front products including polyester fibers and tires, an increasing inventory burden accumulated from the upstream products, such as aromatics, and downstream products, such as synthetic materials and synthetic rubber, is likely to continue to grow in 2015. By contrast, the structure of supply and demand for ethylene products is expected to remain sound.

As China's self-sufficiency in petrochemical products, including PVC and TPA, has improved, the export of these products will likely decrease gradually. So exports will be down about 4 percent to US\$46.4 billion (50.02 trillion won) from last year. During the second half of last year, Samsung Total and SK accomplished an expansion of paraxylene (PX) to a total capacity of 3.3 million tons. This year, Samsung Total is increasing new facilities by 120,000 tons of styrene monomers (SM), while Hyosung is increasing by 320,000 tons of propylene. Therefore, the volume of exports is expected to increase by 5 percent due to the expansion of the supply capacity of all kinds of products. However, its amount will decrease as the unit price of exports is decreasing due to the lower price of raw materials from the dip in international oil prices. When we look at the oil price last year on a scale of 100, its price this year is 83. The unit price of imports will decrease from 910 to 747. Therefore, the unit price of exports of petrochemical products will decrease from US\$1,508 (1.63 million won) to 1,376 (1.48 million won) per ton, and the total amount of exports will be US\$46.4 billion (50.02 trillion won).

The main factors that affect the petrochemical business this year are the drop in oil prices, the economic recovery in the U.S., and shale gas. The weak yen will not be able to affect the domestic petrochemical industry.

The Korea Petrochemical Industry Association said, "If the drop in oil prices doesn't link to an increase in demand, it will have negative effects on the petrochemical industry, both in the short-term and the long-term. Since the decrease in oil money of oil producing countries, including the Middle East and Russia, due to falling oil prices, worsens financial conditions, the demand could be reduced."

Economic recovery in the U.S. will be an indirect positive factor for domestic industry. When the economy in the U.S. is in good shape, more production facilities will be run in China, and the increase in demand in China can lead to an increase in exports of Korean products.

The changes that shale gas might bring should be noted. As the economic efficiency of shale gas is increasing due to the development in drilling technology, competitiveness of the petrochemical industry in the North America region is improving as well.

## Oil Refining Industry

Last year, the oil refining industry struggled with three obstacles, such as the decrease in refining margins, the drop in oil prices, and the drop in exchange rates. This year, the industry is expected to struggle as well due to the improvement of self-sufficiency in China and the Middle East, major export markets, owing to the expansion of refining facilities, and unstable factors, including the strong yen. However, if the demand for oil products increases from the economic recovery and refining margins stabilizes from stable oil prices, the oil refining business will be better to a certain degree.

The Korea Institute for Industrial Economics and Trade (KIET) expects that the refining industry is the only sector from its 12 major business sectors, which will see an 0.8 percent decrease in exports this year from a year ago. The KIET's report read, "In the case of the oil refining industry, falling exports are inevitable, since exports of petroleum products in the U.S. have expanded due to oversupply in the global market, and the development of shale gas and the demand in the major export markets, China and Indonesia, have slowed down."

The weak yen is another factor that makes prospects this year uncertain. The KIET report also read, "The domestic oil refining sector has a high tendency to compete with Japan in terms of high value added items, including gasoline, diesel, and jet fuel. Therefore, if the weak yen continues, this could adversely affect exports due to weak price competitiveness."

As of the third quarter of last year, the combined amount of exports of the four oil companies, including SK Innovation (SK Energy), GS Caltex, S-Oil, and Hyundai Oilbank, amounted to 56.2777 trillion won (US\$52.2 billion), accounting for 56 percent of total sales. The figure is down 9.32 percent from 62.0616 trillion won (US\$57.57 billion) during the same period a year earlier. It shows that the exports have been decreasing since 2012. The weight of exports of these oil companies is well over 50 percent of its total sales. If export are sluggish, it is the structure that cannot expect good results.

Shinhan Investment Corp. forecast that oil refining margins will increase despite the drop in oil prices, saying, "The falling oil prices because of the recession will turn into an improvement in the refining margins this year. In the recession, oil prices is inversely proportional to refining margins. Rather, the margins decrease when oil prices go above a certain level."

Amid the prospects that its circumstances this year will not be different, the U.S. holds the key for the recovery in the oil refining business. After the oil crisis, the U.S. has banned exports of crude oil to other countries, except for Canada, in order to secure stable resources in 1975. However, as the production of oil and shale gas is rapidly increasing, its imports of oil are decreasing drastically.



Key Business Terms for 2015

# Heads of Conglomerates Emphasize Differentiation, Innovation in New Year's Addresses

Major business groups such as Samsung, Hyundai Motor, SK, and LG held kick-off meetings for this year on Jan. 2. Their CEOs asked their employees to focus on differentiation, innovation, quality enhancement, and growth in an effort to tackle the uncertainties ahead.

Delivering New Year's addresses, heads of major business groups talked most about overcoming crises. Since the global financial crisis, they have constantly urged employees every year to have a sense of crisis and exert more efforts. However, their messages were even stronger this year. The messages said "We are going through the darkest tunnel since the company's establishment" and "We need to secure our competitiveness to survive in extreme circumstances," showing how strongly they feel about present circumstances.

It is also noteworthy that the heads of the major groups rarely mentioned their future growth engines while stressing the importance of having a challenging spirit and thinking of innovation in order to cope with crises. As they have been struggling in an economic recession for years, companies have continued to suffer from economic difficulties. Also, the economy doesn't appear to be picking up. This is because they cannot afford to map out a future for their companies. A recent prevailing atmosphere in the business industry is to hold out at all costs and survive. As not only Samsung Electronics but also major Korean business groups saw a drastic plunge in profits, domestic companies' confidence has faded greatly.



## SAMSUNG GROUP

The Samsung Group held meetings by subsidiary due to the hospitalization of Chairman Lee Kun-hee, although the chairman had previously presided over their celebration ceremonies until last year. Samsung Electronics Vice Chairman Kwon Oh-hyun picked B2B transactions, software content, service platforms, and the Internet of Things (IoT) as his company's main growth engines for this year.

"We need to create new demands in order to continue the growth of the B2B segment while coming up with content and services to contribute to our competitiveness in the device manufacturing business," he said, adding, "At the same time, we will work on new Internet of Things business models like smart healthcare and smart homes to ensure future sustainability." He also mentioned his company should sharpen its competitive edge in existing core businesses so as to keep flourishing in advanced and emerging markets alike and try to establish a creative organizational culture by such means as the MOSAIC, its collective intelligence system started last year.



## HYUNDAI MOTOR GROUP

Hyundai Motor Group Chairman Chung Mong-koo suggested a global sales target of 8.2 million cars for this year. In 2014, the group sold 8,005,152 vehicles to become the world's fifth automaker to break the eight million mark, following Toyota, Volkswagen, GM, and Renault Nissan.

"We will build a new, 105-story company building at the KEPCO site we purchased last year. And the building, which will be the center of the group, will be developed into a multi-functional business complex and contribute to job creation during the course of construction," he explained. He continued by saying, "Cooperation among the 32 plants in nine countries, six R&D institutes, dealers, and sales networks will be further promoted along with common growth with our business partners."



## SK GROUP

The SK Group's ceremony was chaired by SK SUPLEX Committee head Kim Chang-keun, since group Chairman Choi Tae-won is still in prison. "The absence of the chairman is likely to continue for a while to cause unprecedented difficulties," he mentioned, adding, "Under the circumstances, we will have to concentrate on innovation and make game-changing efforts."

The SK Group showed rather poor performance last year as the energy and chemical business units, which account for the best part of its sales, were hit by the shale revolution and plummeting oil prices. The head of the committee asked the entire group to be committed to creating new business value amid adverse conditions such as increasing risk in emerging economies, the slowdown of the Chinese economy, and the deflation and extended recession in Europe.



## LG GROUP



LG Group Chairman Koo Bon-moo emphasized upon an aggressive attitude. "We presented a number of eye-catching new products based on our technical strength while setting a clear direction for our new businesses like eco-friendly auto parts and energy last year," he commented, continuing, "Still, we cannot be content with what we accomplished last year, and we should strive for the continuation of market leadership."

He added, "Although business conditions will be far from favorable in 2015 due to the forex rate and oil price instabilities and the late starters' rapid growth, we will seek ways to lead the market and be quick to implement them."

## LOTTE GROUP

Lotte Group Chairman Shin Kyuk-ho stressed the importance of strategic approach for its new business and self-reflection so that the Lotte World Tower and the "Omni-channel Strategy" can turn out to be successful. The latter refers to the group's plan for providing the same shopping environments for online and offline customers.

"We will be able to turn ourselves into a global giant if we succeed in implementing the Omni-channel Strategy based on our second-to-none offline capabilities," he said, adding, "In the meantime, we will carry out perfect safety management for the Lotte World Tower so that it can become the most trusted landmark in Korea."



## HANWHA GROUP



Hanwha Group Chairman Kim Seung-yeon mentioned that the acquisition of defense and chemical firms from the Samsung Group late last year would accelerate its innovation with time. "The reshaping of the business structure will present a great opportunity as our acquisition of chemical and life insurance firms did in the past," he remarked.



## POSCO GROUP

Kwon Oh-joon, chairman of the POSCO Group, proposed financial performance as the core key word for this year's business. He said, "The key word I ask our executives and staff to keep in mind this year is to create financial outcomes." He stressed, "We need to boost profitability by developing a customer-oriented marketing strategy and strengthening the project-centered work approach."

## HYUNDAI HEAVY INDUSTRIES CO.

Kwon Oh-gap, president of Hyundai Heavy Industries Co., said, "We are facing many challenges this year as well, such as the global economic recession, lower oil prices, and intensified competition with the shipbuilding industries in China and Japan. Our company is now struggling to win contracts since we have high manufacturing costs including labor costs. And we have to recover our competitiveness through change and innovation."



## GS GROUP

Huh Chang-soo, chairman of the GS Group, said, "Let's go back to basics and get ready for a new leap, marking the 10th anniversary of the group's establishment. We should create an atmosphere that encourages constructive criticism on our previous strategies and practices and embraces new ideas and an innovative management system."

## HANJIN GROUP

Cho Yang-ho, chairman of Hanjin Group, became tearful at his new year's address when he said, "My daughter has caused trouble, involved in a shameful incident last year, and offended people's minds." Then, he couldn't continue his speech for a long time and walked off the stage after saying, "I sincerely apologize to all employees." In the address, he vowed to reform the closed corporate culture and form a communication committee, which personnel at work and outside the company can participate.



## DOOSNA GROUP

Doosan Group Chairman Park Yong-man presented the objective of "Star Project" attainments, which was selected in order to strengthen the fundamental competitiveness of each affiliate, and the extension of the shares of the market. Regarding increasing market share, Park said, "It is hard to expect that the pie of the market itself will grow until the economic recovery speeds up. We need to get a bigger part of the pie in front of us and look for opportunities in new markets, including Southeast Asia and Africa."



## SAMYANG GROUP

Kim Yoon, chairman of the Samyang Group, said, "We will overcome the crisis this year through management efficiency, new market exploitation, and human resources improvement. In order to cope with difficulties, it is urgent to optimize business portfolios with the select and concentration strategy and make the management system efficient, focusing our retained capabilities and resources into the core business."

## CJ GROUP

Delivering his new year's address, CJ Group Chairman Sohn Kyung-shik said, "Based on the creative business portfolio, which transformed the food enterprise into a cultural firm, we shall contribute to the creative economy and the nation once again." Also, he expressed concerns over the prolonged absence of Chairman Lee Jay-hyun and continued, "This year it will be more important than ever for all employees to play a major role."



## KOLON GROUP


Kolon Group Chairman Lee Woong-yeul said at an integrated kick-off meeting for the group, which was held in the auditorium in Kolon Tower in Gwacheon, Gyeonggi Province, "The management guide this year is Timer 2015. If we have strained feelings, as if the timer is ticking at this very moment, and we are put into action thoroughly, we will be able to accomplish 100 percent of our plans."

## KUMHO PETROCHEMICAL

Park Chan-koo, chairman of Kumho Petrochemical, said, "To win the game of go, baduk in Korean, the player needs to spare each stone, build a strong wall and make a home. Likewise, Kumho Petrochemical needs to have joint efforts in order to overcome crisis," mentioning a television series titled Misaeng, which recently went off the air.



## HANSOL GROUP

Marking the 50th anniversary of its founding, Cho Dong-kil, chairman of Hansol Group, emphasized the importance of establishing a management system. He said, "In order to become a top-notch long-lived company with more than 100 years of history, going beyond the 50th anniversary, we need a management system that employees, from top management team to front-line staff, can empathize with and put into practice like advanced global companies." 



## Core Choinomics

# Aggressive Goal Set to Reduce Internal Reserves amid Significant Increase in Conglomerates



Deputy Prime Minister and Minister of Strategy & Finance Choi Kyung-hwan delivering a speech at an economic ministerial meeting held on July 30.

The internal reserves of the 10 major business groups increased by more than 29 trillion won (US\$26 billion), and cashable assets by 5 trillion won (US\$4.5 billion) for the six months from June to November last year. This seems to be because they are having difficulties finding attractive investment destinations amid uncertain economic conditions.

According to market research firm CEO Score, their 83 listed and non-financial subsidiaries recorded combined internal reserves of 537.8 trillion won (US\$488.8 billion) on a consolidated basis as of the end of the third quarter, while the amount had been 508.7 trillion won (US\$462.1 billion) at the end of the first quarter. The reserve ratio went up from 1,679.1 percent to 1,733.6 percent, and the cashable assets increased from 148 trillion won (US\$134 billion) to 153 trillion won (US\$139 billion) during the same period.

The Samsung Group had 196.8 trillion won (US\$178.9 billion) in internal reserves, 14.4 trillion won (US\$13.1 billion) up from six months ago. Samsung Electronics' internal reserves amounted to 168.6 trillion won (US\$153.3 billion) to be equivalent to 86 percent of the group's total.

It was followed by the Hyundai Motor Group (124.5 trillion won or US\$113.2 billion, 7 percent up), SK Group (58.8 trillion won or US\$53.4 billion, 6.9 percent up), LG Group (48 trillion won or US\$43.6 billion, 5.5 percent up), POSCO Group (44.9 trillion won or US\$40.8 billion, 1.1 percent up), Lotte Group (28.6 trillion won or US\$25.9 billion, 3 percent up), Hyundai Heavy Industries Group (17.2 trillion won or US\$15.6 billion, 11.6 percent down), GS Group (10.4 trillion won or US\$9.4 billion, 5.8 percent up), Hanwha Group (6 trillion won or US\$5.5 billion, 4.9 percent up) and Hanjin Group (2.7 trillion won or US\$2.5 billion, 3.3 percent down). The decrements were 2.3 trillion won (US\$2.1 billion) and 90 billion won (US\$81.8 million) for Hyundai Heavy Industries and Hanjin.


Under the circumstances, the Ministry of Strategy and Finance finalized the tax law enforcement ordinance for next year

on Dec. 25 last year. According to it, enterprises have to spend at least 80% – much higher than previous expectations – of their annual income on investment, payment for employees, dividend payment, etc. Huge taxes are imposed on the portion not used for the purposes but left as internal reserves.

The enforcement ordinance, which will be effective for three years, constitutes the most important part of Deputy Prime Minister and Minister of Strategy and Finance Choi Kyung-hwan's plan for stimulating the national economy not by increasing corporate profits but by increasing household incomes. The ordinance is applied to non-small and medium enterprises with an equity capital of at least 50 billion won and conglomerate subsidiaries subject to the ban on cross-shareholding.

They can choose between two options. One is to spend up to 80% of annual earnings on wage payment, investment and dividend payment while being subject to a 10% taxation on the rest and the other is to spend 30% of the earnings on wage payment and dividend payment. Equity investment such as overseas investment and M&A is not included in the definition of the investment according to the plan.

According to market research firm CEO Score, the new enforcement ordinance is expected to pose an additional tax burden of 1.081 trillion won on the top 10 Korean business groups while the amount is estimated to be reduced to approximately 700 billion won on condition that the business groups double their average dividend payout ratio to 20% in step with the government policy. The extra tax burden is estimated at about 554.7 billion won for the Hyundai Motor Group and 379.9 billion won for the Samsung Group with their sum accounting for no less than 86.4% of the total of the 10 groups.

Samsung Electronics recently made an announcement of dividend expansion and Hyundai Motor Company followed on December 24. It is said that the latter is going to increase the dividend per share by at least 30% from a year ago. 

## Structural Reform

# Korean Government Concentrates on Economic Restructuring in 2015

President Park Geun-hye participates in the New Year's meeting of the Korea Chamber of Commerce and Industry on Jan. 5.

At the New Year's meeting with about 1,500 entrepreneurs, government officials and political figures on Jan. 5, President Park Geun-hye remarked that she would try to prepare for the next 30 years of the Korean economy by means of the government's three-year plan for economic reform. Korea Chamber of Commerce and Industry Chairman Park Yong-man echoed by saying, "This year will be the only opportunity for us to work on economic reform, because 2014 was the starting period and next year will be the finishing step."

"This year, the global economy is expected to recover from structural stagnation, and the Korean economy will get better as well," he continued, adding, "I would like to find what we should do with all of you for the Korean economy to be able to prosper by tiding over difficulties such as fast aging and low fertility."

Deputy Prime Minister Choi Kyung-hwan also said in his New Year's address to officials in his ministry, "With restructuring tasks piling up, we will focus our policy resources on addressing such issues as labor market inflexibility, inefficiency in the public sector, education systems separated from their fields, and self-protectionism in the financial sector, saying that economic uncertainties are lingering in the form of interest rate hikes in the United States, a weak yen, and economic crises in oil-producing countries, while household debts are rising and the manufacturing sector's competitiveness is declining at home.

Bank of Korea Governor Lee Ju-yeol also said that the most important issue for 2015 is restructuring for stronger fundamentals and higher growth potentials. "Structural factors like excessive regulations, labor market rigidity, low birth rate, and rapid aging are acting negatively on the Korean economy," he mentioned.


The business and political communities are considering this year as an opportunity for restructuring as well, because no national election is scheduled this year and the Park Geun-hye

administration has passed the halfway point. One of the biggest challenges is labor market reform. The government is looking to increase the flexibility of the labor market by narrowing the gap between permanent and temporary positions. However, a great compromise between corporations, their labor unions, and the government itself is not an easy goal to achieve.

Financial reform revolving around the stimulation of competition also is likely to be easier. The government is currently trying to lower the barriers between industry segments, while promoting the growth of new segments such as fintech, and the sector is responding positively and promptly to it.

Deputy Prime Minister Choi said on Jan. 5, "I will lower the barriers between the segments in the industry so that nimble players such as Internet banks and fintech companies can enter the market with greater ease, which I anticipate will foster innovation and change in the financial sector," he said, adding, "At the same time, I will encourage companies to increase their dividend payout ratios by means of strengthened roles of the national pension fund and taxation plans, which will lead the government's efforts for restructuring and economic revitalization to success."

He added that he would come up with an investment promotion program worth 30 trillion won (US\$27 billion) so that risks in the growth industries can be better mitigated, based on equity investment rather than loans, and more assistance can be provided for the real economy.

The investment promotion program he mentioned is for the government to invest 15 trillion won (US\$13 billion), via the Korea Development Bank, in high-risk future growth industries and large-scale infrastructure establishment projects. The program will work by means of direct investment, and for the private sector to invest the same amount. It was emphasized as an important part of this year's economic policy. 

US\$30,000 Mark in 2015

# Korea's Per-capita GNI Shows Around 400-fold Increase over 60 Years



The streets of the Myeongdong district of Seoul are quite crowded every night with many tourists.

The Bank of Korea announced on Dec. 15 that Korea's per-capita GNI increased 394-fold from US\$67 to US\$26,205, the eighth-highest in the world, and its nominal GNI increased 29,833-fold from 48.3 billion won (US\$44.1 million) to 1.441 quadrillion won (US\$1.314 trillion) between 1953 and last year.

During the period, Korea recorded an annual average real GDP growth rate of 7.4 percent and real GDI growth rate of 7.1 percent. The former jumped from 5.8 percent to 10.4 percent between the 1950s and the 1970s, but dropped to 3.9 percent in the 2010s. The total savings ratio reached 41.7 percent in 1988, but has declined all the way since then to stand at 34.4 percent last year. The household savings ratio plummeted from 24.3 percent to 4.5 percent during the same period. Likewise, the total investment ratio fell from 41.4 percent to 28.8 percent between 1991 and 2013.

In the meantime, the ratio of the primary industry to national GDP dropped from 48.2 percent to 2.3 percent between 1953 and 2013, while those of the manufacturing and service sectors went up from 7.8 percent to 31.1 percent and from 40.3 percent to 59.1 percent, respectively. Wireless communication devices, automobile, semiconductor, and petrochemical products have positioned themselves as the country's main export items since 2000, to take the place of clothes and shoes.

According to the Korea International Trade Association, Korea's semiconductor exports amounted to US\$34.1 billion during the first seven months of this year, followed by petroleum products (US\$30.6 billion), automobiles (US\$20.7 billion), marine vessels (US\$22.2 billion), and wireless communication devices (US\$17.1 billion). Compared to four years ago, semicon-

ductors and automobiles maintained their positions, but marine vessel exports were more than halved. Wireless communication devices and petroleum products climbed up from sixth and fifth each.

Apparel, meanwhile, has not been found on the top 10 list since 2010. Export amounts reached US\$2.7 billion, 16 percent of the country's total exports, in 1980, and increased to US\$4.6 billion two decades later to rank ninth. Shoes exports totaled US\$900 million and US\$4.3 billion in 1980 and 1990, respectively. However, the placing has dropped from as high as third to behind 10th.


The per-capita GNI of Korea broke the US\$20,000 mark in 2010, when it reached US\$22,170, and has remained below US\$30,000 since then. The US\$30,000 mark is forecast to be broken this year if the Korean economy continues its normal growth rate. The International Monetary Fund (IMF) assumed that Korea's per-capita GDP for last year would be at US\$28,738, which is 25th among 35 major countries.

## Surpassing Japan in 2016

Meanwhile, Hyundai Research Institute said South Korea's per capita GDP in 2016 will outstrip that of Japan with nearly US\$40,000 of purchasing power.

"South Korea's GDP per capita will reach almost the same level of Japan next year, and it is expected to overtake Japan in 2016. This is a splendid achievement just 70 years after the independence from Japan," said Lee Jun-hyeop, head of the economic trends analysis department of Hyundai Research Institute on Dec. 21 last year, in the report of 2015 Domestic Trends 10+1.

Based on the prediction of International Monetary Fund Purchasing Power Parity (PPP) figures, the report predicted that Korea's GDP per capita in 2015 will be US\$38,760, which is close to that of Japan (US\$39,108), and Korea's GDP per capita in 2016 will exceed that of Japan in 2016 (US\$39,669) by US\$39,828.

The report pointed out, "While Japan's potential growth rate is 0 percent, that of Korea maintains at 3 percent, increasing the difference between the potential growth rates of Korea and Japan. We need to enlarge a growth potential, improve the economic constitution and the quality of life of people to avoid secular stagnation which is prevalent in Japan." 



## China Effect

# FDI Hit Record High of US\$19 Billion Last Year



Thanks to the “China Effect,” the Foreign Direct Investment (FDI) into Korea hit a new high of US\$19 billion (21.1 trillion won) last year. As China’s capital investment in new investment models, including real estate, food, and clothing grew by a whopping 147.2 percent, the country saw the highest figures.

The Ministry of Trade, Industry and Energy announced on Jan. 5 that the FDI based on declaration reached US\$19 billion (21.1 trillion won), while the FDI based on actual arrival amounted to US\$11.52 billion (12.8 trillion won) in 2014.

The declared FDI amount was up 30.6 percent from US\$14.55 billion (16.16 trillion won) in 2013, and up 16.6 percent from the prior high of US\$16.29 billion (18.1 trillion won) in 2012. In terms of the FDI that arrived actually in the country, the figure grew by 17.1 percent compared to the US\$9.84 billion (10.93 trillion won) of 2013.

Chinese investment into Korea increased drastically. The FDI from China almost tripled to US\$1.189 billion (1.32 trillion won) from the US\$481 million (534.25 billion won) of 2013.

Kwon Pyung-oh, head of the ministry’s trade and investment policy, said, “This is because Chinese capital invested in new investment models such as resort complex projects, games and food. It’s notable that considerable investments were also flown in through Hong Kong and Singapore.”

Indeed, China decided to invest US\$300 million (333.12 billion won) in a resort project in Jeju Island. Also, China and Hong Kong plan to invest US\$500 million (555.35 billion won) in a mobile game business. It is notable that investments from the pan-Chinese region, including Taiwan, Hong Kong, and Singapore, also increased. Total investments from these countries surged from US\$1.462 billion (1.62 trillion won) in 2013 to US\$2.837 billion (3.15 trillion won) last year.

By the amount of FDI, the E.U. is the largest foreign investor in Korea. Its investment grew 35.4 percent to US\$6.504 billion (7.22 trillion won) last year compared to 2013. Despite not enough ability to invest, mega M&As in parts and materials and the petrochemical areas attracted investment. However, investment from the U.S. increased only 2.4 percent to

US\$3.609 billion (4.01 trillion won). Japanese investment into Korea decreased 7.5 percent to US\$2.488 billion (2.76 trillion won). The weak yen and its poor domestic consumption are the main reasons for this.


By industry, the FDIs to both the manufacturing and services sectors improved. Investment in the manufacturing sector increased to US\$7.65 billion (8.5 trillion won) while the services sector drew US\$11.19 billion (12.43 trillion won). By type, investment through M&As increased remarkably compared to green field investment, where a new plant or a business is set up. FDI through M&As jumped by nearly four times from US\$2.015 billion (2.24 trillion won) in 2010 to US\$7.98 billion (8.86 trillion won) last year.

Kwon said, “There are also positive sides such as the retention of employment in domestic companies facing bankruptcy, through equity participation of foreign capital and acquisition. So, don’t be so negative about it.”

In the meantime, a huge amount of inquiries regarding Korea-China FTA are being received from global enterprises, indicating that Korea is becoming a key pathway to enter the Chinese domestic market after the Korea-China FTA.

The merit of “Entrance into China after Investment in Korea” is notable. First of all, organized regulations and policies formed through the FTA are the greatest merit and advantage for the enterprises. China’s complicated process of customs procedures has always been a big barrier for global companies trying to enter the Chinese market.

An official from the Ministry of Trade, Industry and Energy said, “The clause of custom clearance within 48 hours in the Korea-China FTA will save huge amount of time compared to the past.” Global enterprises have always faced non-tariff walls such as delays of clearance and express charges.

In addition, some industries restricted by Chinese government such as services, entertainment, and distribution are now opened with the FTA. The intellectual property regulation in the FTA protects the global enterprises from imitation threats. 

## Year's Top Events

## Top 10 Stock Market Events of the Year



The Korea Composite Stock Price Index (KOSPI) fluctuated between 1,850 and 2,100 points this year, while continuing to suffer from adverse conditions such as a weak yen and plummeting oil prices. The Korea Exchange recently announced the top 10 stock market news items for 2014.

**Opening of New Bourses:** The Korea Exchange opened the gold spot market in March, the ETN market in November, and the U.S. dollar futures night market this month. In addition, it launched volatility index futures and sector index futures and remodeled the stock futures and option markets for asset management diversification.

**KOSPI Drifting Sideways:** The index has moved between 1,850 and 2,100 points this year and failed to break the 2,100 point mark since August 2, 2011, when the market closed at 2,121.27 points. The Korea Securities Dealers Automated Quotations (KOSDAQ) index exceeded 580 points in September, but has dropped since then, failing to top 600.

**IPOs One After Another:** Major corporations such as Samsung SDS and Cheil Industries have been listed on the stock market this year, along with about 70 companies on the KOSDAQ. Samsung SDS and Cheil Industries attracted more than 15 trillion won (US\$13.6 billion) and 30 trillion won (US\$27 billion) each during their IPO processes.

**Policy for Dividend Expansion:** Since taking office in July, Deputy Prime Minister Choi Kyung-hwan has encouraged dividend expansion in the interest of economic growth and shareholder return and reshaped the dividend tax system by, for example, imposing taxes on internal reserves. In step with this, the Korea Exchange released a new dividend index in October and listed a dividend index ETF.

**Corporate Ownership Structure Reform in Samsung Group:** Issues regarding the succession of the Samsung Group


has been highlighted since May, when Chairman Lee Kun-hee was taken to the hospital. Since then, the group listed Samsung SDS and Cheil Industries while selling subsidiaries such as Samsung General Chemicals and Samsung Techwin.

**Hyundai Motor Group's Huge Real Estate Purchase:** The group bought the 79,342 m<sup>2</sup> Korea Electric Power Corporation (KEPCO) building and site in Samsung-dong, Seoul in September at a price of 10.55 trillion won (US\$9.58 billion), more than three times the appraised value of 3.3 trillion won (US\$3.0 billion). Since then, the combined market capitalization of the 16 companies in the group dropped by 12.28 percent amid the controversy over the appropriateness of the price.

**Key Interest Rate at Record Low:** The Bank of Korea cut the key rate from 2.25 percent to 2.0 percent in October. The possibility of an additional downward adjustment is on the rise, as the low prices are continuing and consumer sentiment is showing no signs of recovery.

**Cross-trading between Shanghai Stock Exchange and Hong Kong Stock Exchange:** The cross-trading started last month. Investors now can buy Shanghai A stocks via the Hong Kong Stock Exchange.

**Abenomics and Weak Yen:** Japanese Prime Minister Shinzo Abe has moved ahead with an intensive economic stimulus package in order to escape from deflation and a strong yen. This has lowered the yen-dollar exchange rate by more than 30 percent. The trend is likely to continue for a while as the Liberal Democratic Party won the recent general election.

**Plummeting Oil Prices:** Oil prices have dropped to a five-year low since June due to Iraq's petroleum price cut and the OPEC's failure to reach an agreement on production reduction. The downward trend is expected to be ongoing next year owing to the supply-demand imbalance and slowdown of the Chinese economy. 

**US\$170 Billion Exports****ICT Exports  
Exceeded US\$170  
Billion Last Year**

Smartphones being shipped out on an Asiana Cargo aircraft.

**K**orea's exports in the information and communications technology (ICT) sector hit all-time highs last year, despite unfavorable factors like a global recession and a drop in oil prices.

The Ministry of Science, ICT and Future Planning announced on Jan. 8 that ICT exports grew 2.6 percent year-on-year to reach US\$173.88 billion in 2014, leading to a surplus of US\$86.35 billion. Imports of ICT goods amounted to US\$87.54 billion last year, up 8.3 percent from the previous year.

The ICT industry contributed to the nation's trade surplus and export surges, since the sector accounted for 30.3 percent of total exports.

By item, outbound shipments to semiconductors and mobile phones increased, whereas exports of display panels and digital TVs decreased.

Specifically, exports of semiconductors surpassed US\$60 billion by leading the mobile market based on the local industry's competitive advantage in micro-processing and 3D V-NAND. The corresponding figure for mobile phones was US\$ 26.44 billion, thanks to an upward trend in the first quarter of last year.

In contrast, display panels posted a 3.2 percent year-on-year decline in exports and digital TVs at an 8.7 percent year-on-year drop, owing to the slowdown in global demand and the acceleration of global market penetration by Chinese companies.

In addition, imports of mobile phones grew significantly. The number was US\$7.24 billion in 2014, up more than 85 percent compared to a year ago. Inbound shipments from semiconductors, computers and peripheral devices, and display panels also increased.

**Decreasing Deficit of Technology Trade**


Meanwhile, the technology trade sector, including importing and exporting patents, inventions, and engineering, has continued to grow, seeing a nearly 15 percent increase. In particular, deficits in the trade technology area have decreased for four consecutive years.

The Ministry of Science, ICT and Future Planning (MSIP) has announced findings called "2013 Technology Foreign Trade Statistics" conducted by the Korea Industrial Technology Association on Jan. 1.

Technology trade refers to the international and commercial trading of expenditures and income, which is related to technology or technology services. It includes patent sales, licensing, inventions, passing on expertise, studies on technology guidance, engineering consulting, and research and development services. The MSIP pointed out the importance of the total amount of exports and imports in the technology trade, explaining that it means that the larger the size of the technology trade, the better the companies are capable of innovating their products quickly, according to market changes.

According to the findings, Korea's total technology trade in 2013 jumped by 15.4 percent to US\$18.88 billion (about 18 trillion won), which was a US\$2.521 billion (2.74 trillion won) increase compared to the previous year.

Export of technology grew by 28.9 percent to US\$6.846 (7.45 trillion won), which was a US\$1.535 billion increase compared to the figure of US\$5.31 billion in 2012. The introduction of technology was up 8.9 percent to US\$12.038 billion compared with the previous year. Accordingly, Korea's earnings and expenses of the technology trade (the amount of export of technology versus the amount of introduction of technology) in 2013 improved from 0.57 to 0.48, compared with a year before.

Also, deficits have decreased for four consecutive years. By industry, the ratio of technology exports is high, followed by electronics with US\$3.2 billion (3.48 trillion won, 46.8 percent), machinery with US\$2.004 billion (2.18 trillion won, 29.3 percent) and information and communications with US\$750 million (816.38 billion won, 11.0 percent). The world's biggest technology exporters are China, France, and the U.S., while the major countries of introduction of technology are the U.S., Japan, and Germany. 



**Ordinary Wages**

# Court Rules in Favor of Hyundai Motor Company



The Seoul Central District Court building.

The Seoul Central District Court ruled on Jan. 16 that Hyundai Motor Company must pay only 4.09 million won (US\$3,796) for just two former Hyundai Motor Service employees. Earlier, the labor union of Hyundai Motor Company filed an ordinary wage lawsuit claiming that the employers recalculate their wages by including six items such as bonuses and vacation expenses. The representative action was led by 23 of its employees representing respective occupational groups and 44,000 labor union members, 1,900 former Hyundai Precision & Industries Corporation employees. Approximately 5,700 former Hyundai Motor Service

labor union members participated in the litigation.

### Hyundai Motor's Labor Cost Burden Dropped Significantly

The court regarded, as ordinary wages, only a part of the bonuses of the two out of the five former Hyundai Motor Service employees who represented the 5,700. It ruled that 3.87 million won (US\$3,591) and 220,000 won (US\$204) be paid to them, respectively. "Back in 1999, when Hyundai Motor Company combined Hyundai Precision & Industries Corporation with Hyundai Motor Service, Hyundai Motor Service's rules did

not stipulate that no bonus is paid for an employee with an employment period of less than 15 days," the court explained.

Still, the court did not acknowledge the predictability of the bonuses paid by the automaker, the biggest issue of the litigation. "The bonuses are paid only when the additional and uncertain conditions of having to satisfy a certain number of working days is met," it continued. In December 2013, the Supreme Court suggested regularity, uniformity, and predictability as the criteria of ordinary wages, while accepting regular bonuses as a part of ordinary wages. According to its definition, ordinary wages are those paid at

regular intervals for every employee meeting certain conditions, regardless of his or her work performance.

The recent court ruling implies that the employers are on the winning side. Their additional burden for ordinary wages, which was estimated to reach 5 trillion won (US\$4.6 billion), is expected to shrink to 10 billion won (US\$9.2 million) or so. "It seems that the additional pay will add up to 2.1 million won per employee, and the total is estimated at approximately 11 billion won for the 5,700 workers," one of them said.

### Opposite Responses

Needless to say, the company is relieved. "The ruling that does not consider the bonuses of most employees as ordinary wages will have a positive effect on the ongoing wage structure reshaping and the activities of the Ordinary Wage Improvement Committee," it commented. In contrast, the labor union is preparing to appeal, claiming that the court disregarded workers' due rights according to the Labor Standards Act. "The carmaker decided last year to discuss the issue in the framework of the committee, irrespective of the court ruling, and thus we will continue dealing with the scope of the ordinary wage and when to apply new standards," added the Korean Metal Workers' Union.

The business community as a whole, in the meantime, is rather content with the ruling like the automaker, because a series of lawsuits and trillions of won in extra labor costs would have followed if the labor union's demand for including the bonuses of all employees in the scope had been accepted. Nonetheless, not a few in the community expressed dissatisfaction with the fact that some of the workers' ordinary wages were accepted.

The Federation of Korean Industries mentioned on the same day that the ruling would be an opportunity to settle the controversy over the interpretation of the scope. "Still, there remains the possibility

that previously unexpected conflicts could arise among workers due to partial acceptance," it continued. The Korea Federation of Small and Medium Business expressed concerns over a negative impact on small firms that could be caused by an increase in ordinary wages on the part of big businesses. "If the bonuses for those who work for just one day are deemed ordinary wages, the labor cost burden on smaller companies is sure to become heavier," it said, claiming, "The law has to be revised

we are extremely sorry about the court's denial of the predictability based on minor regulations."

### Source of Another Conflict

Although the employers won the first trial, new feuds are sure to arise as they try to apply the ruling to the negotiations with the labor union opposed to it. "The management will come to the table in March with the court ruling, which means a conclusion is likely to be far away," said



Lee Kyung-hoon (left), head of the Ulsan branch of the Hyundai Motor Company labor union, holds a press conference about ordinary wages on July 30 last year.

right away, so as to prevent further confusion."

"The clause to work for at least 15 days, on which the court denied the predictability of the bonus, was arbitrarily determined by Hyundai Motor Company," the Korean Confederation of Trade Unions criticized, continuing, "The denial of the predictability based on the exceptional case of the workers working for less than 15 days makes no sense at all." The Federation of Korean Trade Unions added, "Bonuses should be paid as compensation for labor regardless of conditions such as the 15-day employment, and

Lee Kyung-hoon, director of the labor union.

However, it is also predicted that the union will opt for compromise instead of confrontation, with things becoming unfavorable for itself, and conflicts between union members will intensify during the course. In September last year, the management and the union broadly agreed upon the adoption of an expanded scope of ordinary wages, but the wage negotiations failed in the end, as hardliners in the latter adhered to the immediate inclusion of regular bonuses in their ordinary wages.



### First Job after Workout

## Kumho Tires Resumes Plant Construction in Macon, Georgia

**K**umho Tires (CEO Kim Chang-kyu) obtained approval from its creditors to resume the construction process of its manufacturing plant in Macon, Georgia. The company is planning to invest US\$413 million in the facilities to create an annual production capacity of four million tires and complete the process in early 2016.

The products produced there will be supplied as original equipment (OE) tires. Once the plant is built, Kumho Tires' overseas manufacturing capacity surpasses its domestic production capacity. The construction process began in 2008, but was halted due to the global economic crisis.

At present, the global annual tire demand is estimated at around 1.6 billion units and the North American market accounts for approximately 20 percent of it. In addition, the North American market is a particularly important high-end one, and the construction of a manufacturing base there can facilitate partnership with automakers and the supply of OE tires. A number of global leading carmakers are found in the southern region of the United States, and thus it can lead to stable supply and repurchases in the replacement tire market. According to the Rubber Manufacturers Association (RMA), the North American tire market is expected to record a compound annual growth rate of 5 percent

between 2013 and 2018 thanks to the U.S. economic recovery and an increase in the demand for OE tires.

The plant of Kumho Tires is slated to be located just 296 km and 177 km away from the Alabama and Georgia plants of Hyundai Motor Company and Kia Motors, respectively. Kumho Tires is currently supplying more tires to the North American plants of Hyundai and Kia than the other two Korean tire manufacturers do.

Non-Korean tire companies are continuing their investment and setting up manufacturing bases in the market as well to better meet demand. At the same time, they are working on production base diversification in order to save manufacturing and transport costs and respond promptly to fast-changing regional trade conditions. Facility capacity and size are regarded as two of the most fundamental factors determining the competitiveness in the industry.

Kumho Tires entered the U.S. market in 1975 and has continued expanding its sales networks for higher sales in the replacement tire market, while sponsoring sports teams for increased brand awareness. For example, it has supported the LA Lakers and Miami Heat since 2010, and the NBA League and the New York Jets football team more recently. 



## Light and Shadow

# Hankook Tire Expands Businesses through Aggressive M&As



Hankook Tire uses an aggressive marketing campaign in the United States.

The domestic automobile industry is expressing concerns over Hankook Tire's decision to take over Halla Visteon Climate Control Corp. (HVCC).

According to sources in the industry on Dec. 18, Hankook Tire, the nation's largest tire manufacturer, has entered into a stock purchase agreement to buy stakes in HVCC from Visteon Corp., the U.S. automotive parts supplier, jointly with Hahn & Company, a South Korean private equity firm. The company will pay a total of 3.94 trillion won (US\$3.6 billion), at 52,000 won (US\$47.28) per share. Also, Hankook Tire will hold a 19.49 percent of its stake, while Hahn & Company will hold a 50.5 percent stake. Through the stock purchase agreement, Hankook Tire has become the second-largest shareholder of HVCC.

The company says it expects strong synergy through a merger between two companies. One factor is that HVCC is a full-line supplier of automotive thermal management solutions, which is the second largest in the world and the biggest in Korea. Another factor is that the company partners with the world's leading vehicle manufacturers and has a customer base similar to the tire industry.

However, some companies in the industry are not pleased with the merger. In particular, Hyundai Motors has uneasy feelings about the private equity firm's takeover.

An official from the industry said, "The burdens on stock dividends and interest are demanding. Also, due to the nature of private equity firms, which should focus more on short-term margins, there is the possibility to have some snags in research and development of HVCC's parts. Hyundai Motors can consider an additional plan for the stable supply and demand of parts." Hyundai Motors

accounts for more than 50 percent of HVCC's sales. Accordingly, HVCC's sales would suffer if the company changes the supplier.

Also, there is a view that Hankook Tire's financial state, which has been sound, can worsen if the company pushes ahead with the acquisition of KT Rental, the nation's biggest car rental service provider, next.

Hankook Tire was spun off into a holding company in 2012, and it has been making efforts to extend its new business area. Hankook Tire (President Cho Hyun-bum) is in charge of manufacturing tires, which is the major business of the company, while its holding company, Hankook Tire Worldwide Co. (President Cho Hyun-sik) is focusing on venturing into new business areas. The company is planning to join a bid to acquire KT Rental when its bid opens next month.

As of the end of September, the total amount of cash and cashable assets that Hankook Tire and Hankook Tire Worldwide Co. possessed was 700 billion won (US\$637 million) and 200 billion won (US\$182 million), respectively. Since the expected undertaking price for KT Rental will be from 800 billion to 1 trillion won (US\$728 to \$909 billion), it seems to be inevitable for the company to get acceptance financing.

An official from the industry said, "It appears to be that expanding new business areas is Hankook Tire Chairman Cho Yang-rai's smooth succession plan for his two sons. If he is rushing to do so without a thorough review of underlying uncertainty, problems in ownership management might come up." The chairman's family holds a combined stake of 74.18 percent of the company. President Cho Hyun-sik holds a 19.32 percent stake, and President Choi Hyun-bum holds a 19.31 percent stake. BK

## “Smile Expedition” to Vietnam

# Hyosung Offers Free Medical Services in Vietnam for 4 Consecutive Years



A member of the “Hyosung Smile Expedition” provides dental services to a child from Tien Phuoc Elementary School in Dong Nai State, Ho Chi Minh City, Vietnam, last year.

With the slogan “Accompany You with Sharing,” Hyosung is participating in various social contribution activities in a virtuous cycle to give back to society. The company is not only contributing to its local community, but is also supporting underprivileged people so that they can stand on their own feet and improve their future.

Along with Korea Food for the Hungry International, Hyosung sent its medical volunteer group “Hyosung Smile Expedition” to Long Tho in Nhon Tracch District, Dong Nai State, Ho Chi Minh City, Vietnam, in August last year and offered free medical services to over 1,700 residents.

The Smile Expedition has volunteered from 2011 to help local communities near the company's overseas sites as a part of Hyosung's global social contribution activities. Every summer they visit Dong Nai State in Vietnam where Hyosung's key spandex and tire cord plants are located. There they provide free medi-

cal services to underprivileged residents who face difficulties in visiting clinics or hospitals even if they are sick.

Twenty-four doctors from Konkuk University Medical Centre and KyungHee University Hospital at Gangdong and 50 volunteers from Hyosung Vietnam Co., including interpreters, medical assistants, and coordinators participated in the Smile Expedition last year.

Hyosung Smile Expedition visited Tien Phuoc Elementary School to offer free medical services, including basic physical examinations, to 350 first graders. It provided them with toothpaste, toothbrushes, and instructions on how to use them. Also, the group distributed emergency kits to 3 other elementary schools in the region.

Moreover, the company provided education on pregnancy and childbirth to 100 expectant mothers in Hyosung Vietnam Co., and donated 150 copies of the book “Pregnancy and Childbirth,” which were printed in Vietnamese.

Hyosung has sent the Smile Expedition every year since 2011, and has offered free medical services to nearly 4,900 residents in Vietnam until now. From 2013, the company strengthened the department of oriental medicine and expanded the scope of its services from 700 residents in 2011 to 1,700 residents last year.

Meanwhile, Hyosung invited a Vietnamese man named Dinh Minh Tam to Korea for follow-up care as a part of the Smile Expedition activities. He is an 18-year-old whom the expedition met during their activities in 2013. Dinh Minh Tam suffered a serious injury on his right arm due to an accident in a vocational school in 2010. After the injury, he couldn't use his right arm, but the medical team of the Smile Expedition thought that he could overcome his ability through a surgery to reconstruct the ligament. He was able to get the treatment, and it was paid for by Hyosung.

Entering Korea on Sept. 14 last year, Tam was hospitalized in Konkuk University Medical Centre, had cosmetic and orthopaedic surgeries, recovered and left the country at the end of October. Tam expressed his gratitude to Koreans and Hyosung, saying “Thank you for giving me opportunities for treatment and rehabilitation.”

Starting from Oct. 20 last year, Hyosung hosted an event to post comments to pray for Tam's recovery on its blog (<http://blog.hyosung.com/1836>) and Facebook page (<http://www.facebook.com/myfriendhyosung>) with the title, “Please Cheer Up This Vietnamese Man, Tam.” The company posted the comment event in both English and Vietnamese, attracting participation from employees of Hyosung not only at home but also abroad, including Vietnam. 🇻🇳

**Consecutive Profits**

# LG Display Surpasses 1 Trillion Won in Operating Profits 2 Years Running



**L**G Display announced on Jan. 28 that it reported quarterly operating profits of 625.8 billion won (US\$572.4 million) and 8.3419 trillion won (US\$7.6290 billion) in sales in the fourth quarter of last year. Its operating profits grew 32 percent quarter-on-quarter, and 144 percent year-on-year. The number is the highest-ever since Q2 2010.


The company has operated at a profit for the 11th straight quarter. Its sales went up by 27 percent in Q4 2014 compared to the previous quarter, and are up 18 percent compared to a year ago.

Its operating profits amounted to 1.3573 trillion won (US\$1.2413 billion) last year, a year-on-year increase of 17 percent. The figure is the highest-ever since 2008.

The firm turned over 26.4555 trillion won (US\$24.1946 billion) in 2014, down 2 percent from the previous year. However, its operating profits increased by a great deal, helped by the strong performance of highly-profitable products. Its net profits totaled 917.4 billion won (US\$839.1 million) last year, a 119 percent year-on-year expansion.

A representative of LG Display said, “Our sales decreased slightly, owing to the increased weight of the cell business, a sales method of half-finished products that do not have backlight modules. However, we were able to improve profitability in 2014 by increasing the sale of ultra-large TV panels, which are value-added products, and high-resolution panels for mobile devices.”

LG Display is focusing on an increase in the production of large OLED panels to sharpen its competitiveness in the TV market. Samsung Display, on the other hand, is concentrating on expanding the production of flexible OLED displays for mobile devices.

LG Display, the only company capable of mass producing large display panels for OLED TVs, is reportedly going to invest around 1 trillion won in its OLED line this year to expand the market. According to industry sources, the world's largest LCD panel maker is scheduled to pour the additional funds into the E4 line in Paju, Gyeonggi Province this year to make large OLED panels. So far, the company has injected around 800 billion won (US\$720 million) in the production facility since 2013. 



## Flourishing Overseas

# KEPCO E&C's Overseas Projects Accumulate 1 Million Accident-free Man Hours



KEPCO E&C (President Park Koo-won) achieved one million accident-free man hours as of Dec. 10, 2014 in the CIPREL IV Volet B EPC Project underway in Côte d'Ivoire since 2013. The purpose of the project is to install two heat recovery steam generators, one steam turbine, and one ACC the 110-MW gas turbine in a local power plant.


KEPCO E&C is planning to complete the project at the end of this year and continue with thorough health, safety, and environment management, so that the 700 or engineers there can work in a safe environment and its business in Africa can be more prosperous in the future.

In the meantime, KEPCO E&C signed a US\$900,000 contract with SPC Power Corporation in the Philippines on Dec. 30 to be in charge of the feasibility studies for Naga Power Plant construction. During the eight months to come, KEPCO E&C provides services such as conceptual design for the coal-fired power plant, power supply and demand research, and an environmental impact assessment.

SPC Power Corporation is a joint venture with KEPCO and a Philippine power company. It acquired the Naga Power Plant, located in Cebu, in September last year from the national Power



Sector Assets and Liabilities Management Corporation.

Last year, KEPCO E&C succeeded in winning overseas projects worth more than 1 trillion won (US\$900 million) combined. The company is expecting that its annual sales record will reach the highest level since its inception in 1975. 

**Dream of Healthy Life**

# LG Life Sciences Contributes to Global Healthy Living

**L**G Life Sciences Ltd. (LGLS) ranks top in exports among Korean pharmaceutical companies. In 2008, the company received the US\$100 million (107.81 billion won) Export Tower Award. It was also the first domestic pharmaceutical company to pass this milestone. Last year, LGLS exported about 150 billion won (US\$139.13 million) of its medicine to 70 countries around the world. Its overseas sales account for more than 40 percent of its total sales and the company is planning to raise the figure to 45 percent this year.

The company has recently established a global business sector and included overseas business and business development, accelerating to enter overseas markets. With the company strengthening direct management in the existing foreign subsidiaries in India, China and the Middle East, LGLS is in the process of establishing foreign subsidiaries in major hub nations, including Thailand, with emerging markets as the center.

The LG Group established LG Life Sciences in 2002. Based on a lavish investment of 20 percent of its sales every year, the company succeeded in the first commercialization of a number of biopharmaceuticals in the domestic market. Also, its synthetic medicines were the first in Korea to have been approved by the FDA in the U.S., establishing a foothold to enter global markets in earnest.

LGLS' best-known export product is Euvax B, a hepatitis B vaccine. This product makes up 50 percent of U.N. relief aid in the hepatitis vaccine sector. Until now, the company has exported to about 70 countries in the world, and the accumulated exports have reached about US\$200 million (215.62 billion won).

Factive, a quinolone antibiotic product, is the first new drug developed in Korea to receive approval from the FDA in the U.S. With a partnership with Oscient Pharmaceuticals in the U.S., its safety is guaranteed with more than 2 million prescriptions in the U.S. Factive is currently licensed to sell in 23 countries in the world, including the U.S., Canada, Mexico, Russia, China, Brazil, and Turkey. Along with 13 top pharmaceutical companies in the area, such as Pfizer (Mexico), Abbott (Canada), Menarini (Europe), Livzon (China), and aRigen (Japan), LGLS is in the process of commercializing the product in 50 countries around the world.

Also, LGLS' DTP-HepB-Hib is the first pentavalent mixed




vaccine developed in Korea. The product received a quality certification from the World Health Organization last year, so the company can bid and supply to international agencies run by UNICEF and PAHO, the affiliated organizations of the United Nations. Therefore, overseas sales of the product will begin from this year.

In particular, the KFDA has recently approved the manufacture and distribution of LGLS' diabetes treatment, Zemiglo, the main substance of which is gemigliptin. This product is the first diabetes treatment developed solely by the company. Zemiglo is on sale from this year. Also, LGLS succeeded in the development and commercialization of Euhib, a vaccine for encephalomeningitis, for the first time in Korea.

Partnering with Sanofi-Aventis, which has the global marketing capabilities and sales networks in the emerging markets and diabetes treatments, LGLS is expecting to see an increase in overseas sales and profits of Zemiglo in earnest. While LGLS is providing Zemiglo as well as materials and finished composite goods, Sanofi is in charge of getting licenses to sell and sales in 79 countries around the world, including Russia, the Middle East, India, and Africa. Therefore, Zemiglo is expected to enter the global diabetes market soon.

The first commercialized vaccine for encephalomeningitis, Euhib, also signed a comprehensive cooperation contract for the supply of complete products, development in China, sales, and licensing with Tianjin Pharmaceuticals Group in China last year.

LGLS is planning to boost its sales of vaccines drastically with its superior technology recognized as Korea's largest vaccine exporting company, production facilities that meet WHO approval, and global quality standards. It will supply encephalomeningitis vaccines and pentavalent mixed vaccines, which are the first vaccines developed and commercialized in Korea, to overseas markets. 

## Conglomerate Debt

# Top 30 Groups' Combined Debt Tops 600 Trillion Won

The amount of indebtedness of Korea's top 30 business groups has increased by nearly 26 trillion won (US\$23.97 billion) in the past two years, surpassing a total of 600 trillion won (US\$553.25 billion).

According to the banking investment industry and Chaebul.com, the total amount of debt of the top 30 groups has risen to 624.3 trillion won (US\$575.66 billion) as of the end of 2013. The figure is up 4.3 percent, a total of 25.7 trillion won (US\$23.7 billion), compared to the figure two years ago. The amount of debt of the top 10 groups stands at 449.6 trillion won (US\$414.57 billion), accounting for 72 percent of total debt.

During 2011 to 2013, by business group, the amount of debt in the Samsung Group increased by 8.6 trillion won (US\$7.93 billion), from 78.9 trillion won (US\$72.75 billion) to 87.5 trillion won (US\$80.68 billion).

The figure in SK Group increased by 8.1 trillion won (US\$7.47 billion), from 59.2 trillion won (US\$54.59 billion) to 67.3 trillion won (US\$62.06 billion). The debt in Lotte Group increased by 3.6 trillion won (US\$3.32 billion) to 35.2 trillion won (US\$32.46 billion) over the last two years, while the figure in Hyundai Heavy Industries Group increased by 900 billion won (US\$829.88 million) to 30.5 trillion won (US\$28.12 billion). And the amount of indebtedness in the GS Group increased by 2 trillion won (US\$1.84 billion) to 30.7 trillion won (US\$28.31 billion) over the last two years, while the figure in the Hanwha Group increased by 1.4 trillion won (US\$1.29 billion) to 16.7 trillion won (US\$15.4 billion).

The debt in Hyundai Motor Group increased from 68.7 trillion won (US\$63.35 billion) to 69 trillion won (US\$63.62 billion), a rise of only 300 bil-

lion won (US\$276.63 million), which is a small sum of money compared to the size of the group.

The LG Group and POSCO Group decreased their debts by 1.5 trillion won (US\$1.38 billion) and 3.8 trillion won (US\$3.5 billion), respectively.


The debt rates of Samsung, Hyundai Motor, SK, and Lotte are lower than 100 percent, which is considered good, having 43 percent, 65.7 percent, 86.8 percent and 65.8 percent respectively.

The debt rate of Hyundai Heavy Industries Group and GS Group is both 112.6 percent, while the rate of Hanwha Group is 144.8 percent, standing in the level of 100 percent.

Some groups' financial conditions are getting even worse. The debt of Hanjin Group rose by 2.7 trillion won (US\$2.49 billion), from 29.7 trillion won (US\$27.39 billion) to 32.4 trillion won (US\$29.88 billion), during the same period. The debt

of Daewoo Shipbuilding & Marine Engineering Co., GM Korea, and OCI also increased by 1.8 trillion won (US\$1.66 billion), 800 billion won (US\$737.67 million), and 600 billion won (US\$553.25 million), respectively.

Hanjin Group has a debt rate of 452.4 percent, ranking 2nd highest among its top 30 groups. Also, the rates of GM Korea and Daewoo Shipbuilding & Marine Engineering Co. are at the top, standing at 353.5 percent and 254.7 percent, respectively.

The debt ratio of Hyundai Group (which is currently restructuring), Kumho Asiana Group, and Dongbu Group is still high, showing rates of 540.5 percent, 381.9 percent, and 269 percent. Moreover, Hyosung Group and Dongkuk Steel Mill Co. show high rates of debt, 220.5 percent and 174.8 percent respectively, even though these companies decreased the amount of their debt. 





# ‘가능성의 날개’를 달다

동해-1 가스전 개발로  
세계 95번째 산유국이 된 대한민국

전국 9개 비축기지에 확보된  
1억 4천 6백만 배럴 규모의 비축시설

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## Double-edged Sword

# Chinese ICT Companies to Make Full-scale Investment in Korean Market



Chinese ICT companies have grown rapidly in their massive domestic market, and now look to expand to other countries. This year, their influence is expected to begin in Korea as well. As a result, experts are saying that it is urgent to establish countermeasures to utilize Chinese ICT enterprises' expansion as an opportunity to grow local companies and industries.

In particular, Alibaba and Tencent, which have quite a lot of capital due to their listings, are likely to fiercely compete with each other to dominate the Korean market. The two Chinese Internet giants are actively trying to forge a partnership with local online shopping sites or online payment service providers. The phenomenon is attributable to an increased demand for Korean online shipping and online payment services by Chinese consumers resulting from the Korean wave. Alibaba is aggressively seeking to enter the messenger service and content businesses, which are Tencent's core areas. Tencent, on the other hand, is eyeing Alibaba's retail and digital payment service areas.

Tencent is one of the three shareholders of Daum Kakao with a 9.9 percent stake in the Korean Internet company. In addition, the largest online gaming company in China holds a 28 percent stake in Netmarble Games. The Chinese Internet firm has recently built partnerships with CJ Games and JoyCity, and it is trying to strengthen its competitiveness in game content in China. Furthermore, the company went into a partnership in April of last year with Danal, a Korean online payment service provider, for payment services between the two countries. The move is aimed at expanding its online payment platform Tenpay.


Alibaba, a latecomer in the area, also made a 100 billion won (US\$90 million) investment in the Korean content industry. China's leading e-commerce company already forged partnerships with KGInicis and Cafe24. The firm also set up a Korean branch, and started to build relationships with local business operators. In addition, it is trying to introduce its Alipay system to 400 online

sites such as Lotte Duty Free and Korean Air.

Alibaba has constantly increased its partnership with domestic companies over the last two to three years. In order to invite domestic online retailers into its e-commerce platform called Tmall, Alibaba went into partnership with Cafe24 in August last year, waiving a fee for being part of the mall and an annual membership fee. Also, the company partnered with a total of 400 companies including KG Inicis Co., a payment gateway service provider, and an airline ticket site. On its online mall site, it uses its Alipay payment system.

"I think that the finalization of the Korea-China Free Trade Agreement will lead to more transactions and investment in the Korean e-commerce and content markets by Chinese Internet companies," said Jun Choon-mi, researcher at the KT Economics & Management Research Center. The researcher added, "It is also easier for Korean companies to penetrate the Chinese market. Since the Chinese government has strengthened its policy to protect intellectual property rights, it is likely to create new opportunities for Korean firms."

Oh Dong-hwan, an official at the Korea Internet & Security Agency, said, "The Chinese market, the nation's enormous financial firepower, and its global network will certainly give us opportunities." He also pointed out, "In the early 2000s, local online gaming companies entered China. But they were robbed of their technology, and Chinese firms got enriched as a result. Tencent is the one that distributed Korean games at that time."

Therefore, Chinese ICT firms' investment in the Korean market using their massive financial firepower is widely acknowledged to be a double-edged sword. Although Chinese capital can be of great help to money-strapped Korean firms at the moment, the outflow of technology or manpower in the name of investment might threaten local firms. 

## Tackling Korean Market

# Global IT Giants Accelerate Efforts to Dominate Korean Market



Global IT giants like Google and Facebook, which already dominate major Internet markets around the world, are accelerating the launch of new offensives to dominate the Korean market too.

With Chinese Internet companies like Alibaba and Tencent joining the trend, there are increasing concerns that the Korean Internet market might be dominated by foreign enterprises.

In fact, local Internet companies are reversely discriminated against by the government, far from getting support to sharpen their competitiveness. Therefore, many in the industry are saying that it is urgent to establish protective measures.

According to industry sources on Dec. 14, Google started an e-book rental service for the first time in Korea in the second week of this month. The fact that the search engine giant chose Korea rather than the U.S. or European countries is getting a lot of attention in the industry.

Google also recently launched Google Play Newsstand for Android, an app that combines Google Play Magazines and Google Play Music by recruiting former employees of Melon, the largest digital music download site in the nation.

Facebook joined the competition to dominate the Korean mobile ad market as well. Following CEO Mark Zuckerberg's visit to Korea in October, major executives of the Asia-Pacific area are also scheduled to visit the nation in the third week of December and hold a briefing on mobile ad strategies involving local media outlets.

On top of that, Chinese companies with enormous financial firepower such as Alibaba and Tencent also introduced various types of content and mobile payment services to the Korean mar-

ket, heralding fierce competition between local and foreign companies from next year.

So far, the local Internet market has been like an impregnable fortress to foreign companies. In particular, Google has been powerless in the local search market. According to market research firm StatCounter, the Web search giant took 91.74 percent of the European market as of November. However, Korean firms constituted 90 percent of the local market, maintaining market dominance.

Nonetheless, market conditions are changing in tandem with a changing environment toward a mobile platform. Naver is unable to find growth momentum in mobile services other than its search engine business. Daum Kakao is also unsuccessful in creating a great sensation after messaging app KakaoTalk.

The government's reverse discrimination against Internet companies, such as cyber censorship, the application of the Juvenile Protection Act, and mandatory game shutdown is causing a sense of crisis for local companies.

As YouTube dominated the local video service market after the implementation of the Internet real-name system, foreign business operators are zeroing in on different kinds of regulations applicable to local companies.

Choi Jae-hong, professor at Kangwon National University, said, "As not only U.S. companies like Google or Facebook but also Chinese firms with serious financial firepower are entering the Korean market, unimaginably fierce competition is expected." He added, "Since foreign companies are rapidly penetrating the local market, it is necessary for the government to ease regulations or provide support soon." 



**Mobile Payment War**

# Competition in Mobile Payment Market Getting Fierce to Dominate e-Commerce Platform

Competition in the global mobile payment market is heating up. Samsung Electronics and Apple are expanding their payment platforms based on their strengths in the manufacturing sector, while existing payment service providers, mobile messengers, and social networking channels are competing for a higher market share.

According to industry sources, Samsung Electronics is looking to sign a licensing contract with LoopPay, an American start-up. The firm owns a patent for wireless card information transmission and magnetic secure transmission, or MST, which allows payment even at stores with no near field communication (NFC) terminal. The result of cooperation between Samsung and LoopPay is expected in the Galaxy S6, to make its debut soon.

Samsung Electronics' partnership with LoopPay is to enhance its competitiveness in the mobile payment market by means of a technique more compatible than the Touch ID and NFC-based Apple Pay, which was unveiled in September last year.

Apple, in the meantime, is planning to incorporate the simple payment technique into the Apple Watch slated to be released early this year.

Google, on its part, recently updated its Google Wallet to add the Split Charge function. The idea is to make payments more convenient and win back customers who are looking forward to Apple Pay. There are no additional fees on Google Wallet aside from credit card fees.

On the other hand, PayPal is penetrating more and more overseas markets to not lose its customers, and Alibaba recently opened its sixth Alipay branch office in Australia. Both of them are going to enter the Korean market in the near future as well. TenCent is striving to expand its Tenpay service by making use of the 600-million-subscriber mobile messenger WeChat, too.

Social network service providers and mobile messengers are taking advantage of their connectivity. Facebook is working on a remittance service based on Facebook messenger, and Twitter is planning to provide a pilot service for account number-free remittance in France in partnership with the BPCE Group.

In Korea, Daum Kakao launched the simple payment service Kakao Pay and the mobile money transfer service Bank Wallet Kakao. Naver released the Line Pay service via messaging app LINE on Dec. 16 to cover countries all around the world, except for Korea and China. NHN Entertainment has decided to grow the mobile payment area based on an e-commerce platform with its acquisition of Korea Cyber Payment.




Industry analysts are saying that the reason why an increasing number of global IT companies are entering the mobile payment market is due to the anticipation that the mobile payment sector will become the foundation of all industries in the future, rather than their desire to get profits from mobile payment.

According to market research firm Gartner on Dec. 15, the global mobile payment market is estimated at over 300 trillion won this year (US\$277 billion), and is expected to grow 30 to 40 percent year-on-year to reach 800 trillion won (US\$737 billion) in 2017.

Kim Jong-dae, senior researcher at LG Economic Research Institute, explained, "Compared to the size of the market, which reaches 800 trillion won (US\$737 billion), fees that mobile payment service providers can collect are likely to amount to only 5 trillion won (US\$4.6 billion) at best." He added, "Global IT enterprises that want to dominate the mobile payment market are trying to differentiate their services and to dominate all sorts of e-commerce platforms through mobile payment services, instead of focusing on revenues by charging fees."

Apple's development of mobile payment and digital wallet service Apple Pay is attributable to its intention to sync with its mobile devices, including the iPhone, iPad, and Apple Watch, rather than collecting fees. The move is aimed at dominating a new market, like the wearable device market, by expanding the sale of mobile devices through Apple Pay and also maintaining existing customers.

Kim said, "Once customers are accustomed to Apple Pay's convenient user experience, the power of Apple's mobile devices will be strengthened further." He added, "iPhone users will be reluctant to use other Android phones, since it will be a hassle. 

## Social Commerce Move

# Wemakeprice Submits Letter of Intent to Buy TMON


 The logo for WemakePRICE, featuring the word "WemakePRICE" in a white, sans-serif font against a red background. The "PRICE" part is in all caps and slightly larger than "Wemake".


 The logo for TMON, featuring the letters "TMON" in a large, bold, black font. The "O" is replaced by a stylized orange and black target symbol. To the right of "TMON" is the text "TICKET MONSTER" in a smaller, grey, sans-serif font.

Online retail and payment industries that combine IT, including social commerce, online shopping, and financial technology (fintech), are rapidly growing. Since social commerce site TMON is being offered for sale, the retail industry is paying a lot of attention to who will take over the company.

If an existing social commerce company acquires TMON, the company will become the largest social commerce firm in the nation. With foreign e-commerce retailers such as Alibaba and Amazon augmenting their influence around the world, the industry is paying attention to whether or not local social commerce companies could compete on equal terms with global companies by increasing their size through M&A deals.

According to industry sources on Jan. 1, 10 private equity firms both at home and abroad participated in the preliminary bidding for the sale of TMON. Competition for bidding is expected to swing into high gear. A preferred bidder will be selected in a month, and the acquisition is likely to be finalized within two months at the latest.

TMON is expected to sell a 20 to 51 percent stake. The company will not hand over its management rights, and Groupon will maintain its position as the largest shareholder of the firm. Instead, new shareholders will be given various kinds of merits.

After being established with just 5 million won (US\$4,530), TMON gradually increased its size. In August 2011, US-based social commerce company LivingSocial purchased the Korean firm for more than 300 billion won (US\$272 million). After that, Groupon bought the firm again. The world's largest social commerce site has selected Deutsche Bank as an organizer to sell

some of TMON's stake and attract investment as a result.


As Wemakeprice has officially announced its intent to buy an ownership stake in its rival company, much attention is being paid to how Wemakeprice's move will affect the acquisition in the future.

In fact, Wemakeprice has been secretly discussing the purchase of an ownership stake in TMON with Groupon. About a month ago, the U.S. firm rejected Wemakeprice's offer.

"We are willing to acquire TMON, and delivered our intention to consider the issue more seriously," said Wemakeprice in a statement released on Dec. 31, 2014. Wemakeprice, which also took part in the preliminary bidding, stressed that its purchase of TMON will create synergy.

"Soon, Korean companies will have to compete with global shopping channels like Amazon and Alibaba. So, we were convinced that we should become a leader of the Korean online commerce industry as soon as possible, to be a winner in a global competitive system and contribute to the national economy," explained Wemakeprice in the statement, adding, "However, we haven't decided on the details of our plan yet."

Related to this issue, the industry is keeping a close watch on whether or not Wemakeprice's move will result in an M&A deal in the social commerce industry.

Some point out that it is difficult to predict how much Wemakeprice's influence will increase after it purchases some of TMON's stake, since Groupon previously emphasized that it will continue to be the largest shareholder. However, many in the industry are paying attention to synergy between Groupon and Wemakeprice. 

## e-Commerce Competition

# Social Commerce Companies Fiercely Fighting For Market Share



In May 2010, the social commerce market was created by TMON, and with the participation of Coupang and Wemakeprice in the same year, a full-scale competition has started in the market. Four years after the creation of the market, three companies are still operating at a loss while fiercely competing with one another and investing hundreds of billions of won.

There is no dominant player in the market. As they sell similar products and operate in a similar way, the amount of money companies spend in advertising, free shipping, and discounts determines their market share. Therefore, when they hire a popular celebrity as a commercial model or raise discount rates, their market share rises temporarily. However, rankings in the market change when they reduce or discontinue spending in ads or coupons. For this reason, observers say that market dynamics will only change when any firm lags behind in marketing competition based on financial firepower.


Coupang is in an advantageous position in the market, since it attracted US\$300 million on Dec. 11. It is very important to introduce new services early, due to the nature of social commerce companies. Thus, this investment is expected to be an opportunity to dominate.

The firm is also performing well in the number of unique visitors, which helps assess the market share of each company. According to market research firm Nielsen Korean Click, Coupang recorded 12.04 million people in the number of unique visitors in December of last year, and therefore it gave the top spot to Wemakeprice with 12.73 million visitors. However, Coupang reclaimed the #1 position in December of this year by securing 12.35 million users, beating Wemakeprice's 12.34 million users.

Experts are saying that Coupang's exponential growth will continue, but next March will be a watershed moment for the company, when it will be forced to release an auditor's report due to a revision in related laws. Unlike TMON or Wemakeprice,

which regularly issues an auditor's report, Coupang does not disclose exact transactions or sales numbers. As a limited liability company, there is no obligation.

Nevertheless, the power of Wemakeprice and TMON cannot be ignored. Huh Min, founder of Wemakeprice and its holding company Wonder Holdings with 1 trillion won (US\$904.7 million), owns a 100 percent stake in Wemakeprice, with TMON wholly owned by the world's largest social commerce site Groupon. It means that the two companies have enormous financial firepower. In particular, Wemakeprice was recently sought after by a few companies, which expressed their desire to make an investment worth hundreds of billions of won in the social commerce firm. The two companies can also make a quick decision and enter a long race, unlike Coupang, which has multiple investors and must consult with all of them.

Industry analysts are saying that competition among social commerce companies for market dominance is expected to grow more intense, since the social commerce market could grow further, stemming from a drastic increase in the mobile population. In 2010, only 50 billion won (US\$45 million) was transacted in the market, but the market was estimated at 800 billion won (US\$724 million) in 2011. The market is projected to reach 5 trillion won (US\$4.5 billion) this year. It is growing exponentially, in light of the fact that the big three online auction and shopping mall websites Gmarket, Auction, and 11 Street, which lead e-commerce, were able to reach 15 trillion won (US\$13.6 billion) 15 years after their establishment. 



## e-Commerce Competition

# Naver, Daum Kakao to Mount Challenges to Global e-Commerce Giants amid Popularity of m-Commerce

According to a report on the 2015 retail industry published by Kiwoom Securities in last December, local mobile shopping transactions are expected to reach 6.9 trillion won (US\$6.3 billion) in the third quarter of next year, surpassing the 6.4 trillion won (US\$5.8 billion) of PC-based e-commerce.

The number for mobile shopping was merely 1.1 trillion won (US\$996 million) in Q1 2013, less than one seventh of the 7.8 trillion won (US\$7.1 billion) of PC-based transactions the same year. However, the figure rose to 3.9 trillion won (US\$3.5 billion) in Q3 2014, narrowing the gap with PC-based e-commerce (7.5 trillion won, US\$6.8 billion) to be just one half.

Mobile transactions are expected to reach 6.1 trillion won (US\$5.5 billion) in Q2 of next year, compared to 6.6 trillion won (US\$6.0 billion) for PC-based e-commerce, overtaking PC-based ones in Q3. They are also expected to ultimately widen the gap in Q4 2015 with 8.1 trillion won (US\$7.3 billion), as opposed to the 6.5 trillion won (US\$5.9 billion) of PC-based transactions.

Son Yoon-kyung, a researcher at Kiwoom Securities remarked, "Women who rarely did online shopping are now moving to mobile shopping," adding, "Mobile shopping is like mobile games for them."

Under the circumstances, Naver is actively seeking to strengthen its online payment system by revamping its organizational structure, which shows the company's willingness to enter the local e-commerce market. In light of Naver's move, other IT enterprises' penetration into the market is likely to swing into high gear.

As the payment services are expanded to the mobile customized payment area, the competition between local IT and foreign financial technology (fintech) companies is expected to heat up.

According to sources at Naver on Jan. 7, the Korean web giant spun out its payment services unit in April 2014 as an independent company. Naver already built payment service called Naver Checkout, but it is planning to strengthen related services through this spin-off company.

Previously, consumers were able to purchase products at affiliated stores through Naver Checkout using their Naver ID. Currently, there are 40,000 affiliated stores, and the company is planning to increase the number.

Daum Kakao, on the other hand, launched mobile shopping

app KakaoPick last year, which integrates the user base of Kakao-Talk with mobile commerce services. Afterwards, simple payment service KakaoPay was released, and the company made an attempt to connect the two services.

As the transactions of mobile shopping related to the fintech sector are increasing, the growth of the e-commerce market is getting a lot of attention.


Market research firm Forrester Research predicts that the U.S. e-commerce market using mobile devices will amount to US\$31 billion (34 trillion won) in 2016, a more than ten-fold increase from the US\$3 billion of 2010.

As the market is expected to expand, global IT giants like Google have started to strengthen their mobile-oriented e-commerce businesses. Since 2010, Google has consistently bought many shopping-related companies involved in mobile payment platforms, social commerce, and delivery services to prepare for its entry into the e-commerce market.

In 2012, the search engine giant changed its online product search service Google Shopping into a subscription-based service, and acquired e-commerce company Channel Intelligence in 2013 to strengthen its online shopping services. The number of searches on Google Shopping using smartphones grew 3.5 times year-on-year.

Experts are pointing out that the competition between Google and Amazon is becoming more intense with the launch of the Internet search giant's new services, and the phenomenon is likely to affect the local e-commerce market as well.

In addition, the number of local startups using mobile platforms is increasing rapidly. Currently, there are dozens of firms, including shopping price comparison apps RedLaser and ShopSavvy, as well as a number of mobile coupon apps.

An industry source explained, "The e-commerce market, where searches for products and payment can be made through one-click services using mobile devices, provides an opportunity to generate new profits." The source concluded by saying, "Local business operators like Naver and Daum Kakao are making efforts to provide their own payment and mobile shopping services. However, compared to foreign companies, the local industry has a long way to go." 



### Seeking New Businesses

## Korean IT Services Industry Likely to Grow 2.7%


The Korean IT services market is projected to grow 2.7 percent to reach 20.65 trillion won (US\$18.8 billion) this year. There continuing trend of conservative investing in the IT sector, and certain market segments such as security and public and social overhead are expected to lead the market. In particular, the industry is likely to focus on cultivating new businesses and strengthening services that combine IT with non-IT areas.

“Fast-growing companies like Samsung SDS and SK C&C are actively engaged in M&A deals and are seeking to enter non-IT service areas,” said Kim Dong-yang, an analyst at NH Investment & Securities. The analyst added, “IT service providers are expected to look for new businesses in non-IT services fields based on their strengths in reducing costs, boosting efficiency, and strengthening online business.” These remarks were made at a seminar on market outlook and technology for IT services in 2015 hosted by the Korea IT Service Industry Association on Jan. 7.

In the manufacturing and IT service sectors, the big data market is forecast to show up this year. Kwon Suh-young, consultant in charge of LG CNS, pointed out that manufacturing companies have a desire to improve product quality, research and development, facility environment, security, promotion and marketing, and management. The consultant said, “Among areas that use big data, real-time and predictive analytics fields satisfy customer expectations a lot,” adding, “As a result, this year is expected to

be a turning point for big data to become a reality, beyond just a conversation topic.”

When it comes to the financial IT area, the market's center of gravity is expected to shift away from the sophistication of business transactions towards customers. Park Il-doo, manager at SK C&C, predicted that the financial technology (fintech) sector will emerge, starting with the appearance of mobile channels, payments, and money transfer services.

As for the logistics, retail, and IT service sectors, the market is likely to expand to service areas using the third platforms. Park Jung-ah, senior researcher of Lotte Data Communication Company, selected an increase in single-person households, less meaningful national boundaries, a change in a purchasing pattern toward the fish model, the breakdown of barriers among retail channels, and the realization of omni-channel and cross logistics as key words for the retail and logistics industries. Accordingly, five predictions were made on the trend of IT services in the retail and logistics areas. They were the expansion of the logistics industry to service-oriented ones using the third platform, countering the growth of the online payment market with IT solutions, the continuing growth of the Internet of Things sector, locking in marketing strategies by delivering the value of customer experiences, and universal channels through integrated logistics platforms based on a cloud environment. 



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## Mixed Growth

# Auto Exports Record All-time High, but Not Much Growth from Previous Year



The total amount of exports of complete vehicles in 2014 reached US\$48.9 billion (53.35 trillion won), recording an all-time high. However, the figure is up only 0.6 percent from US\$48.6 billion (53.03 trillion won) of 2013.

Overseas shipments of vehicles stood at 3.061392 million units, down 0.9 percent from the figure in 2013 to the contrary.

As General Motors (GM) decided to withdraw its Chevrolet brand from Western Europe, the number of exported vehicles of GM Korea plunged sharply. Also,

Korea's auto exports fell due to sluggish markets in Eastern Europe and Latin America.

The reason why the total amount of exports increased despite the decreased number of overseas shipments is that the average prices of exports increased due to the rise in the share of sports utility vehicles (SUVs) in exports.

Thanks to the release of new models, the decrease of individual consumption tax and the expansion of SUV demand, its domestic sales increased 8.4 percent to 1.657397 million in 2014, compared to the previous year.


Imported cars account for 13 percent of its domestic sales. The growing interest in fuel-efficient vehicles raised the demand for foreign diesel vehicles, rapidly.

A total of 214,608 foreign cars were sold in Korea last year, which is up 47.7

percent from the figure of 2013. Germany's big four brands -- BMW, Volkswagen, Mercedes-Benz, and Audi -- accounted for 68 percent of the total domestic sales of foreign vehicles.

Non-German brands, including Ford, Chrysler, and Land Rover, also saw progress. Ford Korea sold 8,718 units in Korea last year, which is a rise of 20.8 percent compared with the previous year. The figure is not only its all-time high record, but also the figure surpassing 6,840 units of Toyota, excluding the Lexus.

Chrysler also attained an achievement. Chrysler Korea sold 5,244 units, which is up 26.6 percent from 2013.

In addition, Land Rover and Peugeot sold 4,675 and 3,118 units, respectively, while Volvo sold 2,976 units, gaining Korean consumers' hearts and showing a maximum of 52 percent growth. 

## Six Year Lead

## BMW Continues to Take Lead in Imported Car Market

BMW continued to take the lead again in the local import automobile market last year. However, it will become more difficult to predict the future, because the competition of Mercedes-Benz and Volkswagen can't be ignored.


According to the Korea Automobile Importers & Distributors Association on Jan. 7, BMW had the largest number of cars newly registered, with 40,174 units last year. It is the first time for a single imported car brand to surpass 40,000 units of yearly sales. BMW has won the number one position for six consecutive years since it became first in the industry in 2009.

After that followed Mercedes-Benz selling 35,213 units and Volkswagen selling 30,719 units (surpassing 30,000 units for the first time), which ranked second and third each by a slight difference. Benz was pushed back to the third place by Volkswagen last year, but it regained the second place this year.

BMW, however, gave the first place to other carmakers in the best-selling model, which is a matter of pride as much as the total sales. Last year's best seller was the Volkswagen Tiguan 2.0 TDI Bluemotion, which sold 8,106 units. The BMW 520d ranked second with 6,546 units, which had won first place



for the previous two years in a row. For Benz, the E220 CDI won the third place for the first time, with 5,921 units, displacing the E300, which had ranked in the top 3 for the last several years.

An official from the imported car industry said, "This year's imported car industry will have an intense service competition through quantitative and qualitative improvements rather than simple sales promotion competition," adding, "To catch up with BMW, which is definitely taking the lead in the service network area, imported car distributors ranking lower than BMW need to expand their service network." 



**Forced Disadvantage**

## Korea Too Immersed in Kyoto Protocol

China, the world's number one greenhouse gas emitter, emitted 9.084 billion tons of greenhouse gases in 2012, which was equivalent to one-third of the global total. It was followed by the United States, which has emitted more than six billion tons this year.

Still, American and Chinese corporations are more laid-back than their Korean counterparts when it comes to greenhouse emissions reductions, because their governments are protecting their business. For example, some governments are only implementing emission trading systems on a regional basis and in a limited number of industrial sectors.

In contrast, the Korean government has led the introduction of the trading system and environmental regulations and added the burden to Korean companies already struggling in the global economic recession.

Except for indirect means such as energy structure diversification and energy efficiency improvement, no direct regulation associated with greenhouse gas emissions is found in China's national economic development plan for the five-year period from 2011 to 2015. In addition, China is not one of the Annex-1 countries, according to the Kyoto Protocol.

The United States, in the meantime, refused to ratify the protocol adopted in 2001 from the get go. Instead, it opted for the Regional Greenhouse Gas Initiative (RGGI). The initiative covers no more than nine states, including Connecticut, and greenhouse gas emissions in the thermal power generation sector only. The introduction of a federal government-level emission trading system was discussed, but it was rejected in the Senate four years ago. The Environmental Protection Agency (EPA), in 2010, made it mandatory for 8,000 or so major power generation and industrial facilities to make regular reports on their emissions quantities. However, the program has entailed no restrictive measure.

### “Kyoto Protocol is a Mere Scrap of Paper”


Canada withdrew from the Kyoto Protocol two years ago in order to protect its industries, and Russia and New Zealand

decided not to participate in the renewed protocol effectively until 2020. Under the circumstances, it has become an incomplete international agreement covering only 15 percent of global greenhouse gas emissions.

It is said that the Korean government is too eager to comply with the protocol despite all this. Korea is a non-Annex-1 country, but volunteered to declare in 2009 that it would maintain its emissions at 70 percent of the BAU by 2020. “The former Lee Myung-bak administration, which put up low-carbon green growth as one of its national policy goals, suggested an unnecessarily high emissions reduction target while hurrying to show off its ambitions,” an industry insider commented.

Experts are also pointing out that the government is making unnecessary haste concerning the nationwide trading of carbon emission rights scheduled to start this year. At present, such nationwide schemes are or will be in place only in New Zealand, Switzerland, Kazakhstan, Russia, Turkey, Ukraine, Brazil, Chile, Mexico, and Thailand. In China, carbon emission trading is testing in just five cities and two provinces of Guangdong, Shenzhen, Beijing, and Shanghai. Canada has limited the trading to Quebec, too.

Last November, the Bank of Korea said in its report that the international cooperation for greenhouse emissions reduction is insufficient, and some countries may be subject to reverse discrimination in the form of increasing cost burdens and weakening industrial competitiveness.

The business community's consensus is that the reverse discrimination is near at hand. For example, the petrochemical industry has to reduce its emissions by 15.4 percent, according to the government's emission rights allocation plan, and the only way for them to meet the target is production cutbacks. “The petrochemical industry is one of the sectors where large capital expenditures are inevitable and greenhouse emissions reduction by 1 percent or more is possible by no means,” the Korea Petrochemical Industry Association claimed. It added, “We may have to pay a fine of 780 billion won (US\$708 million) for the next three years for being unable to attain a goal that cannot be achieved from the beginning.” 

**No Alternatives**

# Nuclear Power Growth Rate Outpacing New, Renewable Energy



**B**oth the nuclear power generation capacity and the number of nuclear power plants in operation have gone up sharply since the Fukushima disaster three years ago.

This trend has been witnessed in a number of countries other than European ones that have to increase the ratio of alternative energy use to 20 percent on average by 2020 in compliance with the EU Climate Change and Energy Package.


According to the World Nuclear Association (WNA), it is China and India that are leading the growth of capacity. China ran 15 atomic power stations with a combined output of 11,881 MWe in 2012, and increased the numbers to 17 and 13,842 MWe in 2013 and to 20 and 17,135 MWe this year. In addition, China is building 29 more nuclear power plants with a combined capacity of 32,955 MWe, has fixed construction plans for 57 more with 61,235 MWe, and is examining the construction of 118 extra stations with 122,000 MWe.

In India, the numbers went up from 20 and 4,385 MWe to 21 and 5,302 MWe between 2012 and this year, and six nuclear power plants are under construction now. Plans have been determined for 22 more plants (21,300 MWe), and the Indian government is considering building 35 more (40,000 MWe). The WNA explained that both of these countries opted for nuclear power instead of alternative energy, despite the increasing necessity for the latter in view of the environmental pollution issue following rapid indus-

trialization and urbanization, because of the lack of infrastructure.

In the meantime, the United States is currently running 100 nuclear power plants with a capacity of 99,361 MWe, and five more (6,018 MWe) are under construction there, while plans for another five (6,063 MWe) are at their final stage. The construction of 17 additional atomic power stations (26,000 MWe) is on the table, too. President Barack Obama recently announced that the U.S. would obtain 20 percent of the electricity it consumes from alternative energy sources by 2020.

Japan, which shut down 50 of its atomic power stations after the disaster, is planning to put them back into operation. According to the Nihon Keizai Daily, Takahama Nuclear Power Plant Units 3 and 4 are expected to pass safety inspections for re-operation within this year before the restart scheduled for the spring of next year. A total of 23 nuclear power plants (20,656 MWe) are currently in operation in Korea, and five additional plants (6,870 MWe) are being built. Plans for six (8,730 MWe) are about to be finalized, too.

“Wide networks of energy storage systems have to be set up in order to make up for the shortcomings of new and renewable energy, which the supply depends heavily on weather conditions,” an energy industry expert advised, adding, “However, most non-European countries are opting to resort to atomic power stations rather than ESS in order to save time and cost.” 



**Most Attractive Merger**

# AICD About to Acquire Ssangyong E&C



The Marina Bay Sands Hotel in Singapore, constructed by Ssangyong E&C in 2010. (Photo by Karya Sendiri via Wikimedia Commons)

On Dec. 29, the Seoul Central District Court allowed the conclusion of an MOU between Ssangyong Engineering & Construction and the Investment Corporation of Dubai (ICD), the preferred bidder for the acquisition.

The ICD is going to conduct due diligence for three weeks before an investment contract is signed based on the MOU. It is said that the ICD has suggested approximately 200 billion won


(US\$181 million) as its payment for the acquisition.

The ICD is one of the two largest sovereign funds of the UAE. It has made huge investments in construction companies and developers around the world, and thus its acquisition of Ssangyong E&C is expected to be a win-win deal.

Earlier, the Investment Corporation of Dubai (ICD), the Samra Midas Group, and Steel & Resources had participated in the bidding for the sale of Ssangyong Engineering & Construction. Under the circumstances, the builder is expected to be able to change hands after seven failed attempts since 2007.

A Singaporean private equity fund had shown up in the preliminary bidding, but did not show up on Dec. 17. It is said that the tender turned out to be successful because the builder addressed most of its contingent project financing liabilities in court receivership, which lowered the contract price to a large extent.

The Samra Midas Group had taken part in the bidding in order to expand its overseas business. It has taken over small construction firms such as Samra Construction and Ubang Construction.

Steel & Resources, a KOSDAQ-listed company engaged in metal scrap treatment, resources recycling, and the like, had shown interest in the construction field. 

**Plant Deal in Venezuela**

# GS E&C Wins US\$2.6 Billion Venezuelan Plant Deal




Huh Sun-haeng, head of the plant sector at GS E&C, shakes hands with Anton Castillo, president of PDVSA Gas.

GS Engineering & Construction Corp. has signed a US\$2.6 billion (2.81 trillion won) contract to build a gas plant in Venezuela.

The deal is the Pirital-I project from Petroleos de Venezuela S.A. (PDVSA) Gas, which is a subsidiary of Venezuelan state-run oil firm PDVSA. It is a large-scale gas plant construction project of nearly US\$2.618 billion (about 2.8 trillion won), and GS E&C will build the plant on its own.

The project includes the construction of the plant with a daily output of 1,000 MM SCFD, which extracts and separates natural gas into liquids, and the construction of a 174 km pipeline to transport the gas from the plant to another facility located in the port region of El Jose.

Last year, GS E&C signed a project management agreement with the state-run PDVSA to supervise the expansion of the El Palito Refinery, serving as the project management company (PMC) to check construction process at the refinery. Winning the contract this year, GS E&C entered the South American market in the EPC sector for the first time and the company can diversify the market in earnest. 

## Lag in Service Industry

# Service Industry Productivity Stays 46% That of Manufacturing, Lowest in OECD

A report shows that the labor productivity of service industry in Korea is merely 46 percent of that of the manufacturing sector, with productivity of intermediate industries such as the IT, finance, and insurance sector on the lowest spot among member states of the Organization of Economic Development (OECD).

According to the report "Policy Agenda for Service Industry to Gain New Growth Boost" released by the Korea Chamber of Commerce & Industry (KCCI) on Dec. 14, the labor productivity domestic service industry (added value divided by number of workers) in 2012 was 46.6 percent that of manufacturing, which was far behind the figures from countries strong in manufacturing such as Japan (83.0 percent) and Germany (72.8 percent).

In terms of the productivity of intermediate service industry, the gap becomes much bigger.

Korean IT sector productivity in comparison to manufacturing was 73.7 percent, compared to 164.7 percent of Japan and 105.0 percent of Germany. In case of finance and insurance, the domestic figure was 95.3 percent, while Japan's and Germany's numbers were 136.3 percent and 107.3 percent, respectively, marking higher productivity than manufacturing.

The results show that while Germany and Japan are known for their robust manufacturing foundation, their service industry productivity had already surpassed their manufacturing counterpart.

When it comes to the service industry productivity of the OECD member states, Korea's labor productivity was one of the lowest among 25 countries researched, placing the IT industry at 22nd along with the finance and insurance industry at 21st. In terms of the business service sector, Korea ranked 17th among 24 countries.

Under the circumstances, Japan, in particular, is expanding its investment in the fast-growing service sectors of the ASEAN countries, in an attempt to outdo Korea.

According to the Institute for International Trade of the Korea International Trade Association (KITA), the ASEAN region is emerging as a major consumption market based on its eighth-largest economic scale in the world.


"The number of middle-class households with purchasing power is estimated to reach 93 million by 2018 in this region, and its total population is expected to exceed 600 million in 2025," it explained, adding, "In particular, Malaysia, Vietnam, Indonesia, Thailand, and the Philippines are continuing with rapid economic growth, and their service industries' growth rates have remained at over 10 percent all the way since 2000."

Under the circumstances, Japan has boosted its investment in the sectors from US\$1.277 billion to US\$10.836 billion between 2010 and last year. Meanwhile, that of Korea has declined from US\$524 million to US\$399 million during the same period.

As of the end of April this year, only 811 Korean service companies were doing business in the region, whereas the number amounted to 1,926 for Japan. Besides, most of the Korean companies were found in certain countries such as Vietnam and Indonesia.

Anyway, KCCI stated in the report, "Considering that the Korean economy is highly dependent on the manufacturing industry, our service industry should be strengthened towards delivering synergistic effects in unison with manufacturing," emphasizing, "It is important to foster service industries in sectors such as IT, finance, insurance, and business as they serve intermediate role for manufacturing."

Korea Development Institute (KDI) professor Lee Si-Wook, a consultant for KCCI, said, "Leading economic powers such as the United States are showing confidence in restoring manufacturing competence, which is based on their competitive power in the intermediate service industry," pointing out, "We are currently faced with boundaries in terms of boosting manufacturing competence because of low productivity in the intermediate goods industry."

KCCI suggested a number of policy tasks that would serve to bolster the intermediate service industry, including service industry research & development (R&D), training of professional manpower, deregulation on professional services, and the remediation of a differentiating support system compared to manufacturing. 

**Opening Legal Market**

# Major Law Firms Seek Growth, Mid-Sized Ones Focus on Specialization

The domestic legal service circle is busy seeking survival strategies in the face of the full opening of the legal market. Large law firms are setting out to enlarge themselves by recruiting additional talent, foreseeing that competition against huge American and British law firms will become inevitable. Some firms are moving towards strengthening strategic cooperation with foreign law firms that are competent in terms of global networks.

Meanwhile, small to mid-sized law firms are devising various preparations such as enhancing specialization through coordination with middle class foreign law firms or planning mergers between domestic small to mid-sized firms.

The legal circle stated on Dec. 21 that the domestic legal market will be fully open beginning July 2016 in accordance with the Korea-European Union (EU) Free Trade Agreement (FTA), followed by a full opening in March 2017 to U.S. law firms based on the KORUS FTA.

This enables foreign law firms to hire domestic attorneys and to even establish joint ventures with domestic law firms to perform legal representation in Korea. Currently only some parts of domestic legal affairs are allowed to be conducted through its connection with domestic law firms.


There are 21 foreign law firms at present that have entered Korea. The legal circle is expecting that domestic and foreign law firms are highly likely to make collisions in the outbound market, taking care of the overseas needs of domestic companies, rather than the domestic lawsuit sector.

The dominant perspective among the legal circle is that while foreign law firms will focus their efforts on the outbound market during the beginning stages of the full opening, their sphere of business will eventually expand to the domestic legal consulting field. To cope with this threat, major domestic law firms are planning to actively recruit new professionals to “kill two birds” by keeping their dominant positions in the domestic market and

reinforce their overseas business at the same time.

Major law firms are continuing to strengthen their quantitative size, with Lee & Ko (Kwangjang), Bae, Kim & Lee (Taepyongyang), and Yulchon increasing by 110, 103, and 83 new attorneys, respectively, for the past three years. They are also setting the goal of consolidating cooperation with foreign law firms under the assumption that direct advancement into American and European markets bears too much risk. Hwang Mok Park (Chungjeong), for the first time as a domestic law firm, came to a memorandum of understanding (MOU) on strategic cooperation with British global law firm Bird & Bird. Bird & Bird shows strength in the patent sector and intellectual property rights. Yoon & Yang (Hwa Woo) launched an international affairs team in 2012 and a global trade & commerce team in 2013 with 57 professionals deployed for those fields only to prepare for the market opening. Kim & Chang is planning to further enhance their already solid network with foreign law firms, seeing that coordination with local law firms is essential in overseas projects.

Compared to major law firms, there are more diverse spectra among small to mid-sized law firms regarding preparations for market openings. A mid-sized law firm located in Seocho-dong is undergoing discussions on joint ventures with an American mid-sized law firm. This plan is to boost their existing specialization, which would turn the crisis into an opportunity. A source in the legal industry expects, “Small and mid-sized specialty law firms that handle special fields such as mergers and acquisition or information technology could boost profits by expanding consulting services in an alliance with foreign law firms or strengthen international affairs sectors.”

Another mid-sized law firm is considering merging with a counterpart of its size in order to prepare against losing its market presence owing to competition between major domestic law firms and their foreign counterparts. 



## Innovative SMEs

# Korean SMEs to Captivate CES 2015 with Innovative Products



A number of Korean small and medium-sized enterprises (SMEs) are scheduled to participate in CES 2015 and show off Korea's stance as a tech powerhouse.

In particular, some firms like Thinkware and 3L Labs have already received 2015 CES Innovation Awards, and thus they are drawing a lot of attention in the global market.

A total of 119 Korean SMEs are going to participate at CES 2015 in Las Vegas to be held from Jan. 6 (local time), and they are planning to launch marketing campaigns for their products.

According to the Korea Trade-Investment Promotion Agency, 42 companies have set up booths in a space designated for Korean companies at the Las Vegas Convention Center. In addition, 12 Korean firms have set up booths in the space assigned to Korean companies at the 2015 PMA at CES in the South Hall of the Las Vegas Convention Center. Another 65 local companies have registered for independent booths. Accordingly, a total of 119 domestic firms are going to take part in the trade show as a result.


A large number of companies are planning to showcase mobile devices, accessories, and displays. Some will unveil their new technology through wearable devices, driving support systems, smart home systems, household appliances, and broadcasting systems.

Thinkware is targeting the global market with the F750 dashcam, which has already received a 2015 CES Innovation Award for auto accessories, controllers, and navigation areas. This prod-

uct has a micro SD and memory card, which prevent data loss or damage in the event of a serious collision. It also features 1080p full HD and HD 2 channel cameras, and an advanced video clear system.

BYROBOT is also going to reveal a new drone gaming device that can be operated by a smartphone, and is seeking export consultations. The company was set up by experts with more than five years of experience in unmanned aerial vehicles, and was recently offered space at Walmart.com.

3L Labs, which has won a CES Innovation Award in the wearables category, will debut its wearable device called the Foot Logger. After being put inside a shoe, this product can measure the number of steps and the distance of the wearer's run through a pressure sensor and a triple axis accelerometer. Since it can measure the walking and running of the wearer, it is possible to check how much the person exercises in a day. The product can be used for medical purposes as well.

ImageNEXT will showcase OmniPAD, which is an Android-based tablet PC that can be installed in a car and combines a 360 degree monitoring system, a GPS navigation system, and a black box. It can also be used as a portable tablet. In addition, the firm will unveil Smart Personal Mobility, which protects the elderly and infirm based on an automatic driving system, and a telematics and cloud-based auto management system named Fleet Management. 

## Startup Purchase Boom

# Global IT Enterprises Purchase Start-ups



Global IT companies are actively seeking to buy start-ups. Previously, Google succeeded in its acquisition of the Android venture firm, which later took 90 percent of the global smartphone operating system market. Therefore, other IT enterprises cite the purchase of start-ups as future growth industries.

In the past, they worked on M&A deals to create synergy. However, they are now aggressively looking for firms so that they can secure technology and patents for new businesses.

Nevertheless, there are not many M&A cases in the country, due to a stigma about M&A deals. Even though local companies are trying to buy overseas start-ups, successful M&A cases are rare. Hence, an increasing number of experts point out that the ecosystem, in which M&A transactions are recognized to be a step for promotion and advancement of start-ups and pursued smoothly, should be built.

According to the Korea Trade-Investment Promotion Agency on Dec. 22, the world's top 10 IT companies took over 107 start-ups last year. Among them, Yahoo bought 22 firms, Google 19, and Facebook 10.

Global IT giants continue to do so this year. Google purchased Divide, a company that offers a bring-your-own-device solution for corporate environments this year, and the travel app startup JetPac to utilize it to with search engine, Google Now app, and with Google Glass.

Apple also bought book recommendation startup BookLamp, actively seeking M&A transactions. In a briefing on last year's results held this summer, Apple CEO Tim Cook said that the company had acquired 29 firms since late September of last year.

The reason for the takeover of start-ups by large IT companies is attributable to their desire to find new breakthroughs, in line with technological advances of the ICT industry. Their move can be interpreted to mean that since it is not easy for large companies to find and develop new technology, they want to buy ideas owned by start-ups through M&A deals.

These days, start-ups need less money to start their business and have different types of channels to raise money such as crowd funding. Thus, they are less desperate to find investors compared to the past. Rather, there is increasing demand for

special organizations to foster start-ups, which can realize technology quickly and provide support to turn those companies into money-making ventures.

When it comes to Korea, Samsung Electronics purchased app development company SELBY in May, IoT platform firm SmartThings, and mobile cloud solution provider PrinterOn afterwards.

However, what is noticeable is that it is hard to find M&A transactions involving local start-ups.

Most start-ups acquired by Samsung are firms from overseas. One of the reasons for the phenomenon lies in the fact that there are still negative attitudes towards M&A deals.

An industry source remarked, "When a company tries to acquire a start-up, many in the industry think that the company is trying to steal the growth engine of the startup or dump the startup after sponging up its technology." The source stressed, "In order to build a startup ecosystem, start-ups should have a way out through an M&A transaction in a timely manner. Entrepreneurs should have an opportunity to start new businesses, too." BK



### Future Investment

# Korean Government to Invest 4 Trillion Won on Science, Technology, ICT R&D

This year the Ministry of Science, ICT and Future Planning will invest 3.9520 trillion won (US\$35.78 billion) in research and development (R&D) on areas of science and technology and Information Communications Technology (ICT).

The MSIF announced on Jan. 4 that it has confirmed the “R&D Business Comprehensive Implementation Plan,” which invests 2.9037 trillion won (US\$2.63 billion) in Science and Technology and 1.0484 trillion won (US\$949.12 million) in ICT.

The investment scale this year, which excludes research and operating expenses of the National Research Council of Science and Technology and research institutes under the direct control from its total R&D budget of 6.5138 trillion won (US\$5.9 billion), is to grow 7.9 percent compared to last year.

By sector, technology development accounts for the largest part of the budget with 2.2508 trillion won (US\$2.04 billion), following basic research with 744.3 billion won (US\$673.88 million), foundation construction with 640.2 billion won (US\$579.63 million), commercialization and standardization with 161.7 billion won (US\$146.4 million), and science and technology and ICT manpower training with 155 billion (US\$140.33 million).

By project, technology development in ICT will receive the highest funding at 772.3 billion won (US\$699.23 million), following basic research at 744.3 billion won (US\$673.88 million), source technology development at 562 billion won (US\$508.83 million), creation of international science business belt at 440.5 billion won (US\$398.82 million), space technology development at 373.8 billion won (US\$338.43 million), and nuclear power research development at 314.6 billion won (US\$284.83 million).


Also, the total of 228.1 billion won (US\$206.52 million) will be invested in research on nuclear fusion, while 143.9 billion won (US\$130.29 million) will be invested in foundation construction

in the ICT, 118.7 billion won (US\$107.47 million) in creating cooperation between academia and industry, commercialization and technical commercialization, 55.8 billion won (US\$50.52 million) in science technology globalization, and 28.4 billion won (US\$25.71 million) in ICT standardization.

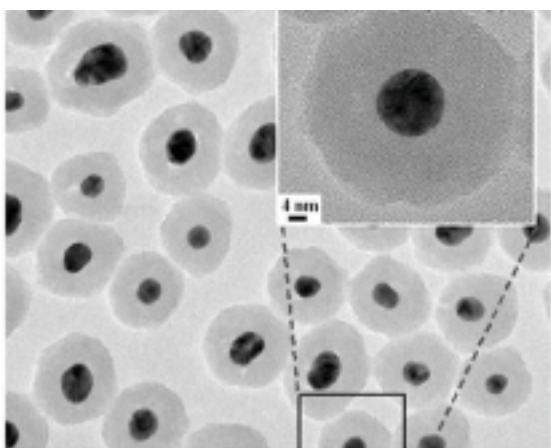
In the meantime, the Hyundai Research Institute mentioned in a report that Korea is falling behind China in 13 out of 85 core technology fields. Released on Jan. 11, the report compares the scientific and technological accomplishments of Korea, China, Japan, and Germany based on relative and absolute indices. The relative indices reflect their difference in economic scale.

Korea distinguished itself in most of the relative indices. For example, its ratio of R&D investment to GDP was 4.36 percent as of the end of 2012, followed by Japan (3.35 percent), Germany (2.98 percent), and China (1.98 percent). The number of researchers per 1,000 economically active people was 12.4 while those were 9.9 for Japan, 8.2 for Germany and 1.8 for China.

The number of PCT patent applications per researcher and the number of published scientific treatises per researcher were 0.038 and 0.089, respectively. Korea lagged behind Japan and Germany in these categories.

Korea was at the bottom, however, when it comes to each of the absolute indices. Its R&D investment and number of researchers were US\$65.4 billion and 316,000, whereas China recorded US\$293.5 billion and 1.404 million. Korea’s patent applications added up to 12,000, equivalent to 25 percent of Japan’s and 60 percent of China’s or Germany’s each. “In summary, Korea recorded 185.4 points in the overall absolute index and China, Japan and Germany posted 565.0, 645.7, and 362.5,” the report read, adding, “Besides, the gap between the two is widening.” 



**Bio-friendly Memory Devices****Making Memory Devices with Chitosan from Crab Shells**

An electron microscope image of silica (grey) coated on the surface of gold nano-particles (black). A silica shell with a similar thickness is formed on each of the gold nano-particles.


A Korean research team has successfully developed a technology to produce memory devices using chitosan extracted from crab shells. This technique is expected to be usable when making memory devices for eco-friendly and bio-friendly electronic equipment in the future.

Lee Jang-sik, professor of the Department of Materials Science and Engineering at Pohang University of Science and Technology (POSTECH), announced on Jan. 12 that his research team has succeeded in developing bio-friendly memory devices based on chitosan extracted from the shell of crustaceans like crabs or shrimp.

The newly-developed chitosan-based device can satisfy the product performance necessary for memory devices in terms of durability and the ability to store information. In particular, the device uses by-products of seafood, and thus it is not expensive to manufacture.

Most of all, the new memory device is likely to be utilized in many areas, since it can be attached to or inserted in the skin, unlike existing silicon devices. Therefore, it could be used in the medical engineering area to make next-generation capsule-type endoscopes, artificial muscles, artificial organs, and patch-type electronic devices.

Professor Lee explained, "We started our research with the aim of making safe and eco-friendly memory devices." He added, "I think that our team could manufacture chitosan-based devices on the surface of the flexible substrate."

The research findings were first published online on Dec. 5 by Advanced Materials, a weekly scientific journal published by Wiley-VCH. 

**New Solar Tech****Making More Efficient, Cheaper Solar Cells**


Dr. Suk Sang-il engaged in research.

A Korean research team has successfully developed a tech to produce more efficient and cheaper solar cells by synthesizing an organic-inorganic hybrid material.

The Ministry of Science, ICT and Future Planning announced on Jan. 7 that a research team head by Dr. Suk Sang-il at the Korea Research Institute of Chemical Technology announced on Jan. 7 that they have succeeded in developing a method to make organic-inorganic hybrid perovskite solar cells. Those solar cells are made from an easily synthesizable organic and inorganic material. Perovskite is a material with a special structure that shows the characteristics of both non-conductors and semiconductors, along with superconductivity.

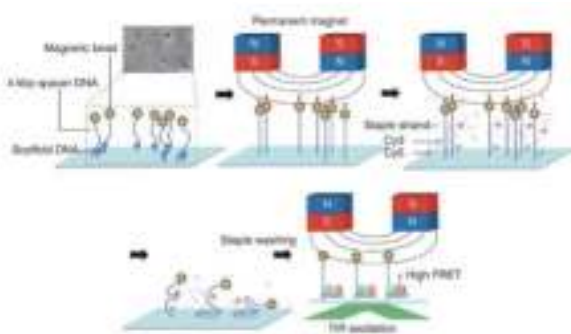
The team has successfully made solar cells with 18.4 percent efficiency using this technique. In particular, the technology can expand the wavelengths of light that are absorbed and increase the stability of its crystal structure based on the method to make a thin perovskite film, which is similar to the structure of the solar cell platform. The new solar cells are easy to manufacture, since they are made by coating low-priced chemical materials at a low temperature.

Dr. Suk said, "This technology could overcome the limits of existing crystalline silicon cells and thin-film solar cells, which are manufactured through complex processing using expensive equipment." He added, "Our team will try hard to develop and commercialize highly-stable original and continuous process technologies in the future."

The research findings were first published online on Jan. 7 by Nature, a scientific journal published by the Nature Publishing Group. 

## Building Nanostructures

# Folding DNA Nanostructures in 10 Minutes



A schematic illustrating the procedure of folding DNA nanostructures with magnetic tweezers.

Korean scientists have developed a new method to build nanostructures within 10 minutes using DNA. A research team led by Professor Yoon Tae-young of the Physics Department of KAIST announced on Dec. 29 that they have developed technology to observe the real-time formation of DNA nanostructures using magnetic tweezers.

DNA origami, which was developed in 2006, is the folding of a number of shorter “stapler” DNA strands to create DNA nanostructures with an arbitrary shape. It is needed to repeat the process of heat treatment, which takes dozens of hours in order to find optimal conditions.

The research team took a step forward from this study and succeeded in creating DNA nanostructures within 10 minutes while adding mechanical tension to DNA molecules by using uni-molecular magnetic tweezers.

The existing technology unwound the inner structure of long backbone DNA chains by heating. However, the research team attached one side of long backbone DNA chains to the surface of glass and attached a magnetic material to the other side. Then, they untangled the inner structure of long backbone DNA chains using magnetic force.

Using this method, stapler DNA can stick to it within a minute, since the hidden reactive parts are exposed at room temperature, unlike with heat treatment. Once all stapler DNA sticks to it, the process removes the magnetic force. Then, the structure will fold as one backbone DNA chain joining together all the many stapler DNA chains through the process of self-assembly.

Yoon said, “In the process of the heat treatment, there are mixed DNA reactions at the same time. So, it was impossible to know what would happen at a certain temperature. However, using this method, it is possible to create DNA nanostructures and observe it at once. This technology will allow us to form more

highly programmed DNA nanostructures.”

Their research findings were published online in the Dec. 3 issue of Nature Communications. 

## Expansion of Application

## Expanding Aircraft OS to Nuclear Power Plants



The yellow arrow points to the computer on which ETRI's operating system is embedded in a drone.


The Electronics and Telecommunications Research Institute (ETRI) announced on Dec. 22 that it has signed an evaluation contract with KEPCO Engineering & Construction (KEPCO E&C) to expand the use of its high-confidence real-time operating system (OS) for army aircraft, called the Qplus Air, to control power plants. It has also signed a memorandum of understanding (MOU) on the standardization of railway parts with the Korea Railroad Research Institute (KRRI).

In 2012, ETRI installed the Qplus Air on an unmanned aircraft and successfully tested the OS on drones. The OS was also adopted to run the condition monitoring system in Surion helicopters.

This time, it will be used in railroads and nuclear power plants, which are directly connected with public safety. For railroads, various types of trains are running by regions and routes in the country, but there are no standardized railway parts. Currently, small and medium-sized suppliers in Korea have to produce parts of various kinds and in small quantities. Therefore, it is hard to get a supply of parts in time and the suppliers to grow. In order to improve the situation, the ETRI is planning to apply real-time OS, Qplus, to the technology of standardizing railway parts in the KRRI.

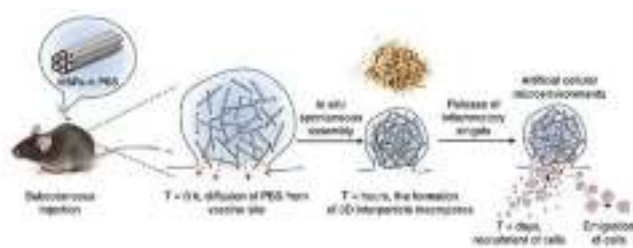
In addition, ETRI has decided to evaluate the applicability of Qplus Air on a Man Machine Interface System (MMIS) in power plants. MMIS is an integrated management system of operation, control, surveillance, measurement, and safety functions during an

emergency.

As the functions of MMIS in power plants have diversified, technologies of software and operating systems have become more important. However, as the nuclear power industry is reluctant to adopt foreign commercial products due to reliability and regulation issues, a domestic OS must be used. If a domestic OS will be used this time after an application evaluation, it would help insure nuclear technology independence, including software and MMIS technologies. 

## Enhancement of Treatment

# Developing 3D Vaccine Delivery Platform



A schematic representation of in vivo spontaneous assembly of MSRs and the recruitment of host cells for maturation.

A joint Korean and U.S. research team has successfully developed a material to deliver a 3D vaccine that can more effectively treat diseases like cancer or infections by activating immune cells through injection.

Kim Jae-yoon, professor of the School of Chemical Engineering at Sungkyunkwan University, announced on Dec. 14 that a joint research team consisting of Korean and U.S. scientists has succeeded in developing a material to deliver 3D vaccine that can control immune cells through a simple injection without a surgery using mesoporous silica rods (MSRs), in partnership with David J. Mooney, professor of Bioengineering at the Harvard School of Engineering and Applied Sciences.


There are MSRs in the material, which have hundreds of thousands of nanopores. When injected into the body, MSRs self-assemble, forming a 3D structure that resembles a pile of matchsticks. Inside the 3D structure, numerous  $\mu\text{m}$ -sized spaces are created, where  $\mu\text{m}$ -sized immune cells can settle.

The research team explains that different types of functional drugs can be injected into the structure. When immune cell-inducing drugs are injected, they attract and mature a large amount of immature immune cells inside the 3D structure, thereby activating them.

After injecting an MSR-based vaccine formulation, and then

cancer cells, into a mouse, they found that dendritic cells gathered inside the 3D structure and controlled the cancer cells as a result.

Dendritic cells discover and mark pathogens like cancer cells, and notify the B cells or T cells of the immune system about them. MSRs are made of biodegradable silica, and thus they are not harmful to the human body. Once accomplishing their mission, they dissolve themselves within a month.

The research findings were first published online on Dec. 8 by Nature Biotechnology, a scientific journal published monthly by the Nature Publishing Group. 

## Marine Digital Communications

# Tech Developed to Send Text Messages 100 Km Offshore



A Korean research team has successfully developed a tech to send and receive text messages to the sea up to 100 kilometers offshore.

The Electronics and Telecommunications Research Institute (ETRI) announced on Jan. 8 that it has succeeded in developing a next-generation marine digital communications technology (ASM 2.0), which offers transmission speeds of up to 76.8Kbps, 8 times faster than the existing Automatic Identification System (AIS).

ETRI explains that this method could be utilized in various types of data communications, including sending text messages between ships at sea or between ships and the shore, exchanging information on sea lanes, and reporting dangerous information.

For example, it will be much easier for people to get information on military training or accidents when operating ships. So far, it has been difficult to deliver safety information due to a lack of digital communications methods at sea. When using AIS, for instance, information on navigation has been delivered one way to the other side.

Dr. Kim Dae-ho, head of the research team at ETRI, remarked, "Our country has obtained a world-class technology in not only terrestrial communications but also marine communications." Kim concluded by saying, "We are planning to dominate the global marine digital market by commercializing the newly-developed method as soon as possible." 



**Double-digit Growth**

# Number of Foreign Tourists Skyrockets Due to Hallyu Boom



The streets of the Myeongdong district of Seoul are quite crowded every night with many tourists.

According to data from the Ministry of Culture, Sports and Tourism and the Korea Tourism Organization (KTO), the number of foreign tourists visiting Korea surpassed 10 million in 2012. That happened 30 years after the figure exceeded one million for the first time in history in 1978, recording 1.08 million.

In particular, the number of tourists has seen double-digit growth since 2009 except last year of 9.3 percent. Its figure this year is expected to increase by more than 16 percent compared to last year. It is the biggest increase since 2004 when recorded 22.4 percent.

The figure has increased due to the number of tourists from China.

According to the KTO, the number of Chinese tourists to Korea is expected to reach 6.12 million by the end of the year, accounting for 43 percent of the total foreign arrivals in Korea. China is the only country from which more than 6 million tourists from one country visit Korea a year.

In particular, 6 million Chinese visitors spent approximately US\$9.6 billion (10.54 trillion won) this year, accounting for 55 percent of its total tourism income of US\$17.6 billion (19.32 trillion won).

The KTO is estimating that its effect on the economic output of Korea this year amounts to 17.4 trillion won (US\$15.85 billion)

Thus, with more and more Chinese tourists visiting Korea, the deficit range in tourism profits this year is expected to be US\$2.2 billion (2.42 trillion won), the lowest since 2009 of US\$1.27 billion (1.39 trillion won).

However, concerns have been growing about the Korea tourism industry's increasing dependence on the Chinese market, the weak yen and the weak yuan. These factors are expected to put a strain on the government, which has a target of attracting 20 million foreign tourists a year by 2017. 

**2 Trillion Sales**

# Annual Duty-free Sales of Incheon Airport Reaches New Record of 2 Trillion Won


The annual sales of the duty-free shops of Incheon Airport has reached a new high of 2 trillion won.

Incheon International Airport Corporation announced on Dec. 24 that this year's annual sales of duty-free shops of Incheon Airport surpassed two trillion won as of Dec. 17.

The annual sales of 2 trillion won is the one reached for the first time globally, beating Dubai Airport and other big airports in European and North American regions in competition for the highest record of airport duty free sales.

This record is highly due to effects of Chinese tourists. 35 percent of sales of the last three quarters occurred from Chinese tourists.

The sales of duty free shops of Incheon Airport have maintained the number one position in the global airport duty free sales

since 2011. This year's sales is expected to reach 2.1 trillion won by the end of the year. 



The Incheon Airport duty-free shop area is quite popular with travelers.

## Korean Cosmetics

# Extremely Popular with Chinese Tourist



Sulwhasoo Extra Refining Special Gift Set.

Chinese tourists are sweeping luxury cosmetics products in Korean department stores and duty-free shops.

Korean cosmetics companies are planning to increase their production volume, with the number of Chinese tourists visiting Korea expected to go up next year.

LG Care's Hoo Cheongidan Wanghoo Set, priced at about 650,000 won (US\$590), is currently sold out in every department store, duty-free shop, and door-to-door sales channel. Its Hoo Cheongidan Hwahyeon Set, which was released only in duty-free shops for the Chinese national holiday season, recorded a sales volume of 20,300 sets in October alone to become the number one duty-free shop item of the month.

Amore Pacific's Sulwhasoo Gungjung Soap has enjoyed huge popularity, too. Approximately 25,000 pieces of the 42,000 won (US\$38) soap were sold last month to show a sales growth rate of 609 percent compared to the beginning of the year. BK

## Selling Every 6 Seconds

According to data about trends in sales of major cosmetic products collected by Lotte Duty Free on China's national day in October last year, the product was the only cosmetic shop



The "Prestige cream d'escargot," a "snail cream" of the brand It's Skin, is sensationally popular in China and Japan.

product that ranked in the top 5.

It became one of the best sellers in China's largest online shopping mall, Taobao and Tmall. Also, the product showed high sales in the global store of Lotte.com on Singles' Day on Nov. 11, which is the Chinese version of Black Friday.

The snail cream has advanced into the markets of nearly 20 countries including not only China but also Southeast Asia, Russia and Latin America and the product won the Gold Award at the 2014 Monde Selection in May last year.

An official from the company said, "One of the products sells every 6 seconds all over the world, and its sales are expected to exceed 5 million soon if the trend continues."

Since this product contains 12,600mg of a filtrate of snail slime, which protects the body of snails. That is 21 percent by concentration, which moisturizes the skin and prevents dehydration. Also, it helps with skin troubles as it helps multiply cell tissues and grow epithelial cells. BK

## Expansion of Overseas Branches

Able C&C, which runs brand shops Missha and Apieu, recently opened the fourth overseas Missha in Naucalpan, Mexico and the fifth one in Claveria, Mexico City.

Mostly middle or higher class people live in both regions. In particular, these regions are popular with young couples with purchasing power, since there are well-known private schools, restaurants, and shopping malls.

According to the Foundation of Korea Cosmetic Industry Institute, the Mexican cosmetics market is the second largest in South America following Brazil. Mexico has a high demand for colored makeup products and a high potential for growth in men's cosmetics.

Missha is consistently pioneering in the market after their first opening in Mexico City in September 2012. The sales of the first half this year are US\$730,000, which is a 54 percent increase compared to the sales of last year.

Currently Missha has about 13,000 stores in 27 countries worldwide and has 16 stores in South America. BK



Missha's new locations in Mexico are quite popular with the locals.

# 금융강국을 향한 힘찬 레이스!

대한민국 발전의 금융엔진, 글로벌 KDB

지난 60여 년간 대한민국 산업발전과 함께 한 산업은행, 2015년 1월 1일 통합산업은행으로 새롭게 출범합니다.  
통일시대를 준비하는 대한민국 대표 정책금융기관으로 창조경제를 이끌어가는 강력한 엔진이 되겠습니다.



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